

No. 11642  
IN THE  
United States Circuit Court of Appeals  
FOR THE NINTH CIRCUIT

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REFRIGERATION ENGINEERING, INC., a corpo-  
ration,

Appellant,

vs.

YORK CORPORATION, a corporation,

Appellee.

and

YORK CORPORATION, a corporation,

Appellant,

vs.

REFRIGERATION ENGINEERING, INC., a corpo-  
ration,

Appellee.

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**TRANSCRIPT OF RECORD**

(In Four Volumes)

**VOLUME II**

(Pages 369 to 752, Inclusive)

Upon Appeals from the District Court of the United States  
for the Southern District of California,  
Central Division

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(Deposition of Edward G. Kennedy)

DQ71. Referring to Plaintiff's Exhibits No. 2-A and 2-B? A. Yes. That is all Bob Taylor's.

DQ72. Refer to Plaintiff's Exhibits No. 3, 4, 5, 6-A and 6-B. A. Yes. They are all Bob Taylor's.

DQ73. I show you Plaintiff's Exhibit No. 11 and ask you whether you recognize what that is a picture of.

A. That is the old Dry Blast.

DQ74. At the Isabella Furnaces?

A. At the Isabella Furnaces.

DQ75. Did you ever have any trouble with the water freezing inside of the cooling compartments?

A. Not to my knowledge. [471]

#### Cross Examination

By Mr. Lyon:

CQ1. Mr. Kennedy, this catwalk that you spoke about that was located outside of the engine room—

A. Outside of the coil room in what they called the refrigerating room on the end of the building.

CQ2. Was it inside or outside? A. Outside.

CQ3. Was it inside or outside of the engine room?

A. It was away from the engine room altogether because the coil room was on this side of the engine room and I think you had about sixty coils running across this room, that is, on the outside of this room.

CQ4. From the engine room, could you see this catwalk? A. No.

CQ5. Couldn't possibly see it? A. No.

CQ6. Here is Plaintiff's Exhibit No. 10, a model, Mr. Kennedy. This is supposed to represent the ammonia coils, these pipes that are on the right-hand—on your left-

(Deposition of Edward G. Kennedy)

hand—side of what appears to be a Masonite board. Were those ammonia coils located in the engine room?

A. Up over the top of the engine room.

CQ7. Up over the top of the engine room?

A. Over the top of the engine room. [472]

CQ8. And this pipe—this pan, was that located in the engine room?

A. Up over the top of the engine room.

CQ9. This pipe came down through the engine room?

A. I think it came across the top of that outside, ran across this out to the end of this building, just where it shows you here.

CQ10. This pipe with this valve was not located in the engine room at all?

A. It was upstairs. As near as I can remember, it was upstairs.

CQ11. Inside or outside? A. Inside.

CQ12. It was inside above the engine room?

A. Under the roof.

CQ13. It was under the roof?

A. It was under the roof.

CQ14. It was of the same temperature or even higher than the inside of the engine room? A. Yes.

CQ15. That engine room was where you used to sit while you were on the job? A. Yes.

CQ16. That was kept warm? A. Yes.

CQ17. From that room this pipe led outside of the engine [473] room and down into the pan?

A. That part here, yes.

CQ18. That is, this horizontal silver portion which has a drain valve in red on the outer end of it?

A. Yes.

(Deposition of Edward G. Kennedy)

CQ19. There was no danger then of water freezing in this part of the pipe that was inside the engine room?

A. Not very much.

CQ20. But on the outside of the engine room, where this horizontal header pipe and these 4 stand pipes were out in the open, there was a good possibility that the water would freeze in those pipes in cold weather?

A. This valve here was always kept open.

CQ21. You mean you kept this end drain valve open?

A. Yes.

CQ22. Similarly, above each one of these valves which led to the spray headers there was a drain valve to drain that portion of the line which was above that valve?

A. This drain here?

CQ23. Yes.

A. To my knowledge, it was below this valve.

CQ24. And then this model is wrong in that it has a relief valve above the stand pipe—above rather than below it?

A. Yes.

CQ25. Therefore, the operation would be to cut off this [474] valve leading to the stand pipe to stop the water from flowing through the spray header and then open the drain valve which was located on the other side and below that control valve?

A. To the best of my knowledge, yes.

CQ26. That drain valve then operated to drain only that portion of the line which was below the control valve to the spray header?

A. Yes.

CQ27. You operated that system yourself, did you?

A. Yes, sir.

(Deposition of Edward G. Kennedy)

CQ28. Many times?

A. I operated that for quite a little while before I was sent over as chief engineer.

CQ29. You believe you know, when you say that drain valve was located in that position, what you speak of?

A. That has been so long ago that, you know, I could possibly be mistaken on that myself.

CQ30. You actually operated the system?

A. Yes.

CQ31. Is it an actual fact, Mr. Kennedy, that the reason this system was drained was because this whole pipe system outside of this plyboard structure and outside of this second plyboard structure was out in the open air and if you did not drain it because of freezing weather conditions you were liable to freeze up the whole system? [475]

A. There wasn't much chance so long as you kept that valve open.

CQ32. You were supposed to keep that open to avoid freezing it up? A. Yes.

### Redirect Examination

By Mr. Neave:

RDQ1. You stated the temperature in the cooling room was below freezing. A. Yes, it was.

RDQ2. That was the normal condition, it was below freezing? A. Yes.

RDQ3. Did the water in any water pipes inside of the cooling room freeze up? A. No.

RDQ4. Why did they not freeze up?

A. The water pipes on the inside?

(Deposition of Edward G. Kennedy)

RDQ5. Yes. The pipes that showered water down.

A. That pipe coming over through the building from the—

RDQ6. I am talking now about the 2 inch pipes that have holes in them that showered—the spray pipes that showered water down on the brine pipes.

A. Yes.

RDQ7. Now, when the defrosting takes place, there is [476] water in those pipes? A. Exactly.

RDQ8. Now when they stop defrosting what happens to the water in those?

A. The pipes are set on such an angle that they drain themselves.

RDQ9. Then where does the water drain that is in the pipe itself?

A. Just as I say, it is up on an angle and it drains toward that spray all the time.

RDQ10. What about the water in the pipes that are above the valves that turn the water off and on? How do you drain the water out of those vertical pipes?

A. That is what I say, it has been so long ago I may be mistaken on this drain being on the bottom. It may have been on the top.

RDQ11. I show you Plaintiff's Exhibit No. 1, which you say is a drawing of a water system of the Isabella Plant, and again call your attention to the drawing which shows a 1 inch drain valve and see whether it refreshes your recollection as to where that drain valve was in the pipe with reference to the water valve.

Mr. Lyon: Objected to as leading and suggestive—grossly so. (Objection overruled)

A. It appears to me that drain was up here. [477]

(Deposition of Edward G. Kennedy)

RDQ12. That is above the water valve?

A. Yes.

RDQ13. Does that refresh your recollection as to where it was?

Mr. Lyon: Same objection as above, leading and suggestive. (Objection overruled)

A. Yes, above the valve.

RDQ14. Above the valve? A. Yes.

RDQ15. What water would drain through that drain valve?

A. If it was up on top of it, it would drain all the line.

RDQ16. All the line that was above it?

A. Yes.

RDQ17. What would you say was the temperature of the water that was used to defrost?

A. That is pretty hard to say what that water was because you know you have got that ammonia goes up into that condenser, you have to liquify it, naturally those coils are warm, that naturally would make that water a little warmer.

RDQ18. Have you any idea how long the water stayed in the pan underneath the coils?

A. There was water in that pan all the time.

RDQ19. It was a pretty large pan?

A. Yes. [478]

RDQ20. Would the water be cool to the touch?

A. That depends on the weather. That building was open there. There was lattice work.

(Deposition of Edward G. Kennedy)

RDQ21. What is your recollection about water from the river being added to the water that was sprayed over the condenser coils? Is that where you got the water from?

Mr. Lyon: Objected to as leading. (Objection overruled)

A. Yes.

RDQ22. You got water for spraying from the river?

A. We pumped it from a standpipe.

RDQ23. That is, water from the river was pumped into a tank? A. Yes.

RDQ24. And from a tank it was pumped over the coils?

A. Run to this well. Then a pump down underneath pumped it up.

RDQ25. Pumped up and then sprayed over the condenser coils? A. That is right.

RDQ26. And that river water came into the well?

A. Yes.

#### Recross Examination

By Mr. Lyon.

RCQ1. Mr. Kennedy, did you ever compare this drawing, Plaintiff's Exhibit No. 1, with the actual installation which [479] you testified you operated?

A. What drawing do you mean?

RCQ2. This blue print. Did you ever check this against the actual structure that you say you operated?

A. I never did.

RCQ3. Did you ever see this print before it was handed to you today? A. Never saw it.

RCQ4. Then your statement that this drawing indicates the drain valve above the main valve in these



(Deposition of Edward G. Kennedy)

headers is not in accordance with your recollection, is it?

A. Well, now, that is pretty long ago. It is pretty hard to just remember those things.

RCQ5. And you do not know anything about the accuracy of this drawing, do you? A. No, I do not.

RCQ6. Similarly, looking at this drawing, you note that the header pipe which goes across the top of the spray coils, which is titled "Water Spray 2 inch Pipe" is on a horizontal, isn't it? A. I think so.

RCQ7. In this drawing?

A. I can't see very well whether it is on the horizontal. I remember in actual practice it was elevated for a drain. [480]

RCQ8. You remember it was not like this drawing? It was not horizontal?

A. When they put a pipe in like that, they put it on a little elevation. Probably on a drawing like that, they would not show it. I don't know, of course. I am not a draftsman.

RCQ9. Did you ever put a level on that pipe?

A. No, sir.

RCQ10. Did you ever measure these header pipes to see whether they were on the horizontal?

A. Only by looking across it.

RCQ11. These header pipes were at the top of this, about 35 foot column?

A. I suppose it would be about 35 feet. I would not say definitely. I never measured that.

RCQ12. How did you obtain access to those pipes 35 feet above the base of these?

A. You came down a ladder to here and you were on a level with the ammonia condenser.



(Deposition of Edward G. Kennedy)

RCQ13. There was a top on top of these coils?

A. There was a roof.

RCQ14. There was a roof? A. Yes.

RCQ15. On the catwalk you couldn't see on the top?

A. You had to go up that ladder to the top of the building. [481]

RCQ16. How long were those pipes?

A. What pipes?

RCQ17. Those spray pipes.

A. I could not say definitely how long they were.

RCQ18. How far were they from the point where you could see them?

A. I would not say that. I could not just say how far it would be.

RCQ19. They weren't right in front of you?

A. No.

RCQ20. They were a matter of at least 15 or 20 feet away?

A. Well, some of them would be. Some would be closer.

RCQ21. How close was the closest?

A. Six or 8 feet inside the building.

RCQ22. You looked down on them when you looked at them, didn't you? A. Looked down on what?

RCQ23. You looked down on the spray pipes?

A. You looked across the spray pipes.

RCQ24. Referring to this model, Plaintiff's Exhibit No. 10, show me where you could look at the spray pipes above the coils.

A. You went inside and went up on your platform to the inside of your coils. [482]

(Deposition of Edward G. Kennedy)

RCQ25. There were platforms on the inside of these ammonia coils? A. Yes.

RCQ26. You went into this room from the bottom, you had a platform and you went into that coil system from the bottom and up a ladder? A. Yes.

RCQ27. Right through the coils?

A. Entering on the outside of the coils and going through an aisle say about as wide as this table all the way up to the top.

RCQ28. How high did the ladder go?

A. I could not give it to you in feet. I know when I stood up there I could look over the top of those coils.

RCQ29. You climbed that ladder yourself?

A. Yes.

RCQ30. How many times?

A. I could not tell you how many times. I did not do the defrosting.

RCQ31. You didn't defrost at all? A. No.

RCQ32. You don't actually know, Mr. Kennedy, of your own knowledge that the water was ever all drained out of these spray pipes?

A. We never had any trouble with the pipes, so it must [483] have been.

RCQ33. Do you know the temperature of the pipes during defrosting? A. No.

RCQ34. Do you know the temperature of the pipes when the air was blowing over them under the influence of the fan which was circulating the air through the system?

A. I could not tell you the temperature of the pipes.

(Deposition of Edward G. Kennedy)

RCQ35. Do you know what the temperature of the air was or have you ever measured that?

A. I do not know.

RCQ36. Have you any figures of the temperature of the air which left this system through the header pipe which is the large silver pipe at the head of the structure?

A. I do not know.

RCQ37. You remember, Mr. Kennedy, that connected with this water pipe was a steam pipe? A. Yes.

RCQ38. And wasn't that steam pipe there for the purpose of thawing out this water?

A. It was only put there as emergency. I never saw it used.

RCQ39. It was put on there for the purpose of blowing steam through that pipe if somebody should forget to open this drain at the end? [484]

A. The primary purpose of that—we admitted the water out of the river. We had no way of filtering that water. Naturally, we got mud, leaves, gravel and stuff like that and it would plug that up and that is primarily what that was put on there for, any sediment or anything that was in the lines which we used to get a terrible lot of; leaves would come up there some times, gravel, slime, mud.

RCQ40. You never saw that used at all?

A. I never seen it used, no.

RCQ41. You stated that temperatures were taken in the cooling compartments while refrigeration was going on? A. Yes.

RCQ42. Do you recall at what points those temperatures were taken in the compartments?

A. No. I do not mind that.

(Deposition of Edward G. Kennedy)

Mr. Neave: The next on the same prior use, your Honor, is that of Edward Leo Harkins, and I would like to have the entire direct examination copied into the record.

Mr. Harkins was the man who actually did the defrosting in this same installation. In the first few pages he identifies the installation and describes it and corroborates the other witnesses, and then on page 102—

Mr. Lewis Lyon: I think that is argument, your Honor.

The Court: You mean he corroborates it only as to the [485] physical structure?

Mr. Neave: As to the structure; yes.

The Court: And that is what you intended to mean by your statement of corroboration?

Mr. Neave: That is what I intended to mean. He is stating the same things.

Q. "DQ46. Perhaps you better tell us just what you did do. (This is direct to what he actually did when he was defrosting.)

"A. I shut the main off first, went out and opened my drains on the 6 inch pipe, this 6 inch header I should call it going up to the header.

"DQ47. Where were those drains located?

"A. Right above the gate valve.

"DQ48. Inside or outside?

"A. Outside of the cooling building.

"DQ49. Where with relation to the catwalk?

"A. The catwalk was right where we turned this valve. That is what it is for. The catwalk set up off the fan room about 6 feet. The fan room was down underneath that catwalk.

(Deposition of Edward G. Kennedy)

“DQ50. You closed off the water as I understand it, the water valves, and then you say you opened the drain valve which was above the water valve on the riser?

“A. Right.

“DQ51. What did that do when you opened that drain valve? [486]

“A. Drained your header out. It was inside your coil room and it came back and drained out all these drains and you could leave the drain open if you wanted to. You would not have to leave it closed. I left it open winter and summer. At the head there was a drain at the head of this line. It I opened also after I was through and took the brine out of the—took the water out of the pipe; that was laying practically pretty near level.

“DQ52. That was the 6 inch supply pipe?

“A. That is it.

“DQ53. That supplied the 4 upright pipes that led to the individual compartments? “A. Yes.”

Then he goes on to describe what he did next after draining the water system, about opening up the doors and starting the refrigeration system.

The Court: Let me see now, on page 104, Question 60: “How often did you do this?” Is he talking about defrosting there?

Mr. Neave: Yes, the whole cycle of defrosting, taking the brine out, defrosting it, and putting it back into operation.

The Court: They took a different one each day?

Mr. Neave: That is right. There were four compartments.

May I call your Honor's attention to Question 67, par-[487] ticularly Question 70, about the temperatures.

The Court: Very well.

Mr. Neave: That is all I wish to summarize of the direct examination.

The Court: Mr. Lyon?

Mr. Lewis Lyon: I will ask him the entire cross examination be copied in the record at this time.

The Court: On page 110 there appears to be some testimony of this witness on cross examination concerning the platforms on the inside of the cooling rooms. There has been no testimony on that. I don't know whether it is material or not.

Mr. Neave: I don't think that it is material, your Honor, but there is a description of it in the testimony itself, and I think that the platforms are shown in the inside of this model.

The Court: Yes. I noticed them yesterday.

Mr. Lewis Lyon: As in the case of the previous witness, I call your Honor's attention to the cross examination on page 113, which is merely corroborative of the other witnesses. They did not measure the temperature of the air at any time, or this witness didn't as he states on cross question 33:

"CQ33. Did you ever, at any time, measure the temperature or put a thermometer in and measure the temperature of [488] the air at the top of these coils?

"A. No. Hughie Smith did that once and I seen him do it myself but I did not get the temperature off him."

I would also call your Honor's attention to a portion of the direct examination, particularly that beginning on page 99, through Questions 24 to 38 inclusive, which describe the complete isolation of these chambers or cells during defrosting. I can read that if you wish.

The Court: It is in the record and I am reading it.

I still do not understand this description, how he got into the separate compartments which went crosswise there.

Mr. Neave: There is a ladder, I believe, that went up inside.

The Court: The ladder is on the other side?

Mr. Neave: I don't think it is shown in this model.

The Court: The ladder that came in here?

Mr. Neave: Yes, I believe so, and that went up from the inside. Then there were platforms like floors in each story so that they could get at the pipes.

The Court: I do not recall any testimony either about what became of the slush or waste.

Mr. Neave: I think that they testified that that went down into the cellar and was pumped back over the condense rcoils.

Mr. Lewis Lyon: Pumped back over the hot ammonia coils [489] and circulated back again.

Mr. Neave: And additional water came in from the river at the same time.

The Court: How did they get in to open this door?

Mr. Neave: They had to go to the ladder and climb up on top of the coils.

The Court: I think I understand it.



## EDWARD HARKINS,

called as a witness on behalf of plaintiff, having been first duly sworn by Gertrude E. Ryan, Notary Public, testified as follows:

## Direct Examination

By Mr. Neave:

DQ1. What is your full name?

A. Edward Leo Harkins.

DQ2. What is your residence address?

A. 6046 Sawyer Street, Pittsburgh, Pennsylvania.

DQ3. By whom are you employed at present?

A. Government, Pittsburgh Ordnance.

DQ4. That is in the Chamber of Commerce Building?

A. Chamber of Commerce Building.

DQ5. Were you ever employed by Carnegie Steel Company? A. From 1904 to around 1917. [490]

DQ7. Did you ever work at the Dry Blast plant of the Isabella Furnaces? A. Yes.

DQ8. What was your work there?

A. Helping the engineer out.

DQ9. In the engine room?

A. In the engine room.

DQ10. And later what was your occupation?

A. Later I got on the thawing off, i.e., defrosting the coils.

DQ11. That is defrosting the brine coils of frost?

A. Yes.

DQ12. Do you recall what years you were the coil tender?

A. I was only on there about a year or so. I just don't recall the year. I could not say for sure.

DQ13. It was before 1917?

A. Yes, before 1917.



(Deposition of Edward Harkins)

DQ14. Was it before the last war?

A. It would be around 1915, I would say.

DQ15. Did you do the actual defrosting during that period. A. Yes.

DQ16. Who was in charge of the Dry Blast Plant during that time?

A. Bruce Walter and Bob Taylor at that time. [491]

DQ17. Was Mr. Swope or Mr. Brandt there?

A. Mr. Brandt and Mr. Smith was there, Hughie Smith.

DQ18. Do you know whether Mr. Smith, Mr. Walter and Mr. Taylor are alive?

A. No. I think Walter and Taylor are dead, both of them.

DQ19. What about Mr. Smith?

A. Mr. Smith is dead.

DQ20. When you were the coil tender—is that what you called it? A. Yes.

DQ21. When you were coil tender, in what years did you say you thought you were coil tender?

A. Around 1915.

DQ22. Do you recall whether it was before the last war? A. That was after the last war.

DQ23. After the last war?

A. Wait a minute. It was not. I did not work there after the last war. I am mistaken on that. It was before the last war because I was working for them at that time.

DQ24. Will you describe the operations you went through as coil tender?

A. You mean the first thing in the morning when I come out?

(Deposition of Edward Harkins)

DQ25. That is right.

A. The first thing I done was went in and shut the [492] brine off and shut the doors at the top of the coil, the hanging door, see that they were shut and the valve shut off. Come down—

DQ26. These doors that you speak of, did you shut them in all four of the compartments?

A. No. Just the one compartment we were thawing off. Then I went down and opened the valve at the top of the brine coil. Then I went out and started up my pump and that pumped it back into the storage tank.

DQ27. Was there any door to shut off the air at the bottom of the compartment?

A. Yes. There were two doors we closed on that certain section. We left the others open. There were four partitions there and there were four doors and the one we was going to thaw off we shut them doors. The same way with the valve, we opened the valve and pumped it out.

DQ28. After you had pumped out the brine from the brine coils, what did you do next?

A. Went up the ladder and opened the valve on the main water line.

DQ29. What ladder is this?

A. On the inside of the engine room because the valve was right at the top of the ladder.

DQ30. That is the water valve?

A. Yes. We opened that to the section we was thawing [493] out. We opened that valve that run up into the headers of that coil.

(Deposition of Edward Harkins)

DQ31. Where was the second valve that you are talking about?

A. The first one was the main one. The next one was the coil we was thawing off.

DQ32. And was that inside the engine room or outside? A. That was on the outside, the coil valve.

DQ33. How did you get to the place where this second valve was on the individual pipe that went up to the refrigerating room?

A. They had a catwalk. There was a door at the top of the ladder and that catwalk came out and ran in the engine room right where we came out the ladder. Then we went out on that catwalk to open the other valve.

DQ34. When you had these two water valves open, what happened to the water then?

A. It went into the coil that we was draining off and that went down over this coil into the cellar, ran down into the cellar and out in a well.

DQ35. Then where did the water go from the well?

A. That was pumped back up again over the condenser coils.

DQ36. Did any other water go into this well other than the water that came down from the drainage? [494]

A. We had water coming from a stand tank on the outside. I figure that stand tank was about 75 to 85 feet high or more.

DQ37. In the outdoors? A. Outdoors, yes.

DQ38. Where did the water come from that was put into the standpipe?

A. Pumped up by a pump house from the river.

(Deposition of Edward Harkins)

DQ39. I don't think you told us where the water came from that was in the pipe that led over the coils, the brine coils.

A. That came from a tank that we had under the coil system, the condenser upstairs. There was a pipe ran up there and it came from that tank down to this valve.

DQ40. These condenser coils and the tank under them, where were they placed with relation to the engine room?

A. I don't get that.

DQ41. Where was the condenser coil with respect to the engine room?

A. That was right above the engine room. We had to go up a flight of stairs to get up there. I would say that was anyhow in the neighborhood of about, I guess the engine stood about 40 feet or something like that off the ground, and then this pan that was a water can to catch the water that came off the condensers upstairs.

DQ42. That was fairly sizeable?

A. I will say it was a pretty large pan. I will figure it was about anyhow, it was 20 feet in width and over all in length of about 75 feet even longer.

DQ43. Do you recall how deep?

A. Eighteen inches anyhow, even more.

DQ44. How long would you keep the water running down over the brine coils?

A. Well, some days it would be longer than others. I figure a day like this it would take at least 2 hours running steady over the coils.

DQ45. When you had completely defrosted, what did you do then?

A. Went back over the same routine only reversed it.

(Deposition of Edward Harkins)

DQ46. Perhaps you better tell us just what you did do.

A. I shut the main off first, went out and opened my drains on the 6 inch pipe, this 6 inch header I should call it going up to the header.

DQ47. Where were those drains located?

A. Right above the gate valve.

DQ48. Inside or outside?

A. Outside of the cooling building.

DQ49. Where with relation to the catwalk?

A. The catwalk was right where we turned this valve. That is what it is for. The catwalk set up off the fan room about 6 feet. The fan room was down underneath that catwalk.

DQ50. You closed off the water as I understand it, the [496] water valves, and then you say you opened the drain valve which was above the water valve on the riser?

A. Right.

DQ51. What did that do when you opened that drain valve?

A. Drained your header out. It was inside your coil room and it came back and drained out all these drains and you could leave the drain open if you wanted. You would not have to leave it closed. I left it open winter and summer. At the head there was a drain at the head of this main line. It I opened also after I was through and took the brine out of the—took the water out of the pipe; that was laying practically pretty near level.

DQ52. That was the 6 inch supply pipe?

A. That is it.

DQ53. That supplied the upright pipes that led to the individual compartments?

A. Yes.

(Deposition of Edward Harkins)

DQ54. After draining the water system, what did you do next? A. I went and opened up the doors.

DQ55. Which doors.

A. The solid doors in the cellar. Then I closed my valve at the bottom, the one I was using for pumping out and went out the top.

DQ56. Brine valve? [497]

A. Brine valve. We had had a little pump there to pump that out while we were thawing off. When we finished that we generally closed that and the doors were opened. That left air come through there. Then went up on top and opened the brine valve on top so as to fill the coils again. Then I opened the doors for the blow engines to pick up.

DQ57. You opened the doors at the top?

A. Yes.

DQ58. As well as at the bottom? A. Yes.

DQ59. Was that your entire cycle of operation?

A. Yes.

DQ60. How often did you do this?

A. Once a day. First thing in the morning when I came out.

DQ61. Did you do it for the same compartment each time?

A. No, not for the same compartment. Took a different one each day. Took No. 1 today, No. 2 tomorrow, No. 3 the next day, No. 4 the next day and started back on No. 1.

DQ62. Did you defrost during the day or at night?

A. Defrosted during the day. Never was on night turn.

(Deposition of Edward Harkins)

DQ63. Did the plant operate during the wintertime?

A. Yes.

DQ64. And did you defrost during the wintertime?

A. Yes. [498]

DQ65. Were there some days during the wintertime when you did not operate the plant or when you changed your routine any?

A. The plant would operate all right but we would shut the compressors down when it would come down so far that it was just according to the moisture.

DQ66. In the air?

A. In the air. It got down so far we did not need it. We shut the compressors down until we got another reading.

DQ67. Did you take any temperature readings in the various cooling room compartments?

A. No. I did not.

DQ68. Were you ever in the cooling room yourself?

A. Yes.

DQ69. Were you in the compartments which were in operation? A. Yes.

DQ70. How cold would you say it was in there?

A. Anyhow below freezing point because it had to be. If it wasn't below freezing point, your pipes would thaw off regardless. I would say anyhow it was around 30, 28 or 30, sometimes far colder than that.

DQ71. What is your best recollection of the temperature of the water that was used for the defrosting?

A. I could not say that. I never took the temperature [499] of that at all. I don't know even if they took the temperature of it.



(Deposition of Edward Harkins)

DQ72. It wasn't hot though?

A. It wasn't hot. We wasn't allowed to use the hot water.

DQ73. I show you Plaintiff's Exhibit No. 1 and referring to the drawing on the left-hand side of this Exhibit, do you recognize that as a blueprint of any device that you have seen, any structure you have seen?

A. Yes.

DQ74. What is it?

A. These are the valves I am talking about closing off.

DQ75. What is this structure?

A. This is the coil room.

DQ76. Where? A. In the freezing room.

DQ77. Of the Isabella Furnaces? A. Yes.

DQ78. Could you trace for me on here the water pipe lines?

A. Our catwalk was out here. Wait a minute.

DQ79. This pipe here says, "6 inch brine feed."

A. This is the front. This is the platform. These are the doors.

DQ80. What platform. Are these inside of the building? [500] A. Yes, inside.

DQ81. How did you get up to these platforms?

A. By a ladder. There was a ladder all the way up.

DQ82. What are these pipes in the middle here?

A. Looks like coil room to me.

DQ83. Brine coils? A. Yes.



(Deposition of Edward Harkins)

DQ84. On the left-hand side of this drawing, there is a mark, "6 inch water main." What would that be from your recollection of that installation?

A. That is the one that ran along the catwalk. Your catwalk ran along here. You handle these valves off your catwalk.

DQ85. What is this 6 inch gate valve?

A. That ran up to your header, up inside of your coil room.

DQ86. Then just above the 6 inch gate valve, there is marked, "1 inch drain valve"? A. Yes.

DQ87. Was that the way it was on the actual structure?

Mr. Lyon: Objected to as leading—grossly so.

A. Yes. There were four of these.

DQ88. Four of these?

A. Yes. Four compartments on each side, four of these.

DQ89. One for each compartment? [501]

A. One for each compartment.

DQ90. Do you recall what the size of the spray pipe was from the coils?

A. Do I recall, you mean these drip pipes?

DQ91. That is right. A. Two inches.

DQ92. Two inch pipes? A. Yes.

DQ93. Did you at any time during your operation of the defrosting cycle have any difficulty in defrosting the pipes because of water freezing inside of the refrigerator room? A. I never had no trouble.

DQ94. Do you remember how many of these drip pipes, as you call them, there were in each compartment?

A. I would not say that because I never counted them.

(Deposition of Edward Harkins)

DQ95. Quite a few?

A. Quite a few because there was one from each coil.

DQ96. Each set of coils? A. Yes.

Cross Examination

By Mr. Lyon:

CQ1. Did you ever see this drawing before, this blueprint that is in front of you?

A. Not that I know of.

CQ2. Did you, at any time, ever make a comparison between this drawing and what is shown on it and what you say you worked on at the Isabella Furnace plant? A. I don't get you on that.

CQ3. Did you ever compare what is shown on this drawing with what actually existed at the Isabella Furnace plant? A. Yes, there is lots of things shown.

CQ4. Did you, at any time, make an actual comparison of what is shown on this drawing with what was at the Isabella Furnace plant?

A. I made it in my noodle. I didn't draw it.

CQ5. You don't remember ever seeing this particular drawing before it was shown to you here?

A. I do not remember.

CQ6. The first time you actually saw it was when it was presented here at this hearing?

A. Yes, that I know of.

CQ7. You are pretty sure that what is shown on the drawing, Plaintiff's Exhibit No. 1, is just what you recall it to have been at the Isabella Furnace plant?

A. I would not say that either because I told you the reason why it has been so long. I do not keep tag on every place I work and every little thing I do.

(Deposition of Edward Harkins)

CQ8. You are not sure?

A. I could not say it was a correct drawing. I could not say that. There may be some little change in it or some- [503] thing.

CQ9. However, this spray system that has been pointed out to you, are you certain it is correctly shown on this drawing? A. Yes, as much as my knowledge.

CQ10. Inside of these cooling rooms, there are one, two, three platforms? A. Yes.

CQ11. How far apart were those platforms?

A. You mean how high?

CQ12. What was the difference in height?

A. I judge about—I don't know, about three feet above my height. I am 5 foot 4 inches. About 8 feet.

CQ13. About 8 feet? A. Yes.

CQ14. How far was the top of this platform from the top of the coils?

A. From the top of the coils, what do you mean?

CQ15. The coils are shown on this drawing as extending up to a point which I will mark by "A" on Plaintiff's Exhibit No. 1 for identification? A. Yes.

CQ16. The platform immediately below that I will mark "B." How far was that platform "B" below the top of the coils?

A. Practically, pretty near the same distance, around [504] 8 feet.

CQ17. So that standing on that platform, you could not see the top of the coils?

A. Wait a minute. I was up on them coils every day while I was working there. I had to go up there to close these doors. They had zinc doors there.

(Deposition of Edward Harkins)

CQ18. You went up the ladder?

A. We had to go up a ladder.

CQ19. And the doors are represented by what I have marked with an arrow as "Door," are they not?

A. Doors. There was a door in each compartment.

CQ20. That is one I have marked?

A. This is a door here, this is a door here, in each compartment.

CQ21. This is the door that closed up over the outlet?

A. No. I see what you mean. You mean the door that went—set in the center of the coils like the blowing engines took the air up there. Them doors, when them doors were closed there would not be any way to go up there.

CQ22. Doesn't this indicate one of the doors?

A. No.

CQ23. Where are they?

A. Right in the center.

CQ24. Where did you go to close those doors?

A. On top of the water sprinkler. [505]

CQ25. Is the position of that water sprinkler correctly indicated in Plaintiff's Exhibit No. 1?

A. Well, I don't just exactly remember that. I know they was above your freezing coil and we had to walk on them anyhow to go over to close these doors.

CQ26. You don't remember how they were positioned above the coils, how the spray pipes were positioned above the coils?

A. You mean the holes in them or just how high are they off the pipe?

(Deposition of Edward Harkins)

CQ27. Yes, that and any other details.

A. I figure they was about 4 inches or so off your freezing pipe.

CQ28. Remember anything else about them?

A. They had drains in them. There was holes all along these pipes so the water would come down over your coils.

CQ29. Now, you climbed up a ladder which is inside this room, of course, when the air was off; you were not in when it was blowing through.

A. Yes, every day.

CQ30. When air was blowing through?

A. We had to. The reason why, these compartments here, we had to go through 4 compartments like that to get to this ladder that set in back. This is where you enter the freezing room. The ladder set right up in that corner. You [506] had to go through this compartment to get over to your ladder. If you thawed No. 1 off, you would have to come back again to get to No. 1 coil again.

CQ31. You walked through there and got up on top of these coils to close the doors?

A. Yes, and to close this valve here and open it.

CQ32. After you did that, you went back down here and closed the bottom door?

A. Yes. You had to keep these doors closed all the time to keep the air from blowing out.

CQ33. Did you ever, at any time, measure the temperature or put a thermometer in and measure the temperature of the air at the top of these coils?

A. No. Hughie Smith did that once and I seen him do it myself but I did not get the temperature off him.

(Deposition of Edward Harkins)

CQ34. Isn't it a fact that one of the objects of blowing air through these coils was to get the water out of the air?

A. Yes, the moisture out of the air. That was the idea.

CQ35. And any water continually dripping from these spray heads back into the air would put water back into the air, wouldn't it?

A. No, because this section was cut off.

CQ36. I mean when you turned the air on again.

A. Yes. [507]

CQ37. And if you left water in this spray header pipe that water would drip back into the air again?

A. No. That is what we used this drain valve for here that is along your catwalk. We drained that out. That would drain this out.

CQ38. It would not remain in that pipe to drip into the air? A. That is right.

CQ39. If you did not open this drain, as you have just testified, the water would remain?

A. No. It would not because it would drip out.

CQ40. It would drip into the air and your air would pick up the water? A. Yes.

CQ41. Did you yourself, at any time, measure the temperature of the air passing through this coil at any point? A. No, I did not.

CQ42. You spoke, Mr. Harkins, about there being a drain valve at the end of this header pipe?

A. Yes, sir.

CQ43. You always opened that drain valve and left it open after each operation?

A. I could. It would not hurt anything.

(Deposition of Edward Harkins)

CQ44. You did leave it open?

A. Yes. I did it often. [508]

CQ45. At the same time this valve at the header here where it came down off the tank and ran into the well, there was a valve right at the top of the ladder, the main valve that was closed first, then, by leaving this drain open it would take the water in the main line out so it would not freeze?

A. These pipe here were covered, insulated.

CQ46. You got all the water out of this header pipe so it would not freeze?

A. Yes, so you wouldn't have any trouble the next time.

CQ47. That header pipe was located outside the building?  
A. Yes, sir.

CQ48. Not in the cooling room?

A. Not in the cooling room, no.

Redirect Examination

By Mr. Neave:

RDQ1. I forgot what you stated you did to the drain valves before you turned the water on when you were going to defrost.

A. I closed them the first thing before I opened the valves at all. I could open the valve all right. It would not hurt nothing.

RDQ2. You closed the valve before you turned on the water?

A. I could of left it on. It wouldn't hurt nothing [509] because that ran away. Didn't hurt anything by running.



(Deposition of Edward Harkins)

RDQ3. Waste a little water?

A. Yes, waste a little water. That is all. [510]

Mr. Neave: Now this deposition closes the depositions on the Carnegie Steel Company use in Pittsburgh. I will now offer Exhibits 1, 2-A, 2-B, 3, 4, 5, 6, and 6-B. Exhibits 7 and 8 I shall offer later.

The Court: Exhibit 1 is the diagram?

Mr. Neave: Exhibit 1 is the diagram.

The Court: 2-A, 2-B, 3, 4, 5, 6-A and 6-B are the letters?

Mr. Neave: Are the letters, and that is all that is being offered at the present time. Exhibits 7 and 8 were identified by one of the witnesses but concerns another use about which another witness later on in Chicago testified to, and I shall offer it at that time.

The Court: Very well.

Mr. Neave: I will also offer Exhibit 10, which is the model.

The Court: And Exhibit 11, the photograph?

Mr. Neave: Yes, and Exhibit 11, the photograph.

The Court: Exhibit 12 is Swope's letter and his deposition isn't offered?

Mr. Neave: That is right, so I am not offering that.

The Court: Admitted.

(The exhibits referred to were received in evidence and marked Plaintiff's Exhibits 1, 2-A, 2-B, 3, 4, 5, 6-A, 6-B, 10 and 11, respectively.) [511]

[Note: Plaintiff's Exhibits Nos. 1 to 6B and 11 will be found in the Book of Exhibits at pages 1117 to 1124 and 1126.]



Mr. Neave: The next series of depositions, your Honor, are relating to a sale of a refrigeration equipment by Hayes Brothers, in Indianapolis, and the sale was made to the Polar Ice & Fuel Company in the same city, who ran an ice distributing plant and who subleased this plant to others to run it. It was one of these plants where they have 10-cent and 25-cent pieces of ice which they sell with an automatic means of dispensing.

I suggest that the stipulation be copied into the record, which is on pages 5 and 6 of the deposition.

Now, your Honor, I would like to read the entire deposition of Mr. Barton, who is the first witness.

The exhibits pertaining to this use are Exhibits 13 to 29 in your Honor's book. [512]

### STIPULATION

It is stipulated by and between the parties by their counsel:

1. That the hearings in Indianapolis are held pursuant to notices served upon the defendant and now before the Notary, Mr. Norman E. Metcalf.

2. That the provision of Rule 26(a) of the Federal Rules of Civil Procedure that depositions taken prior to service of answer shall be by leave of the Court, is hereby waived.

3. That the witnesses shall be sworn by Mr. Norman E. Metcalf, who is fully qualified under the provision of Rule 26, section (2) and (c) of the aforementioned Rules.

4. That the testimony given here shall be taken stenographically and transcribed by Mr. Norman E. Metcalf.

5. That the testimony, when transcribed, shall be submitted to the witness for examination and shall be read to or by him, and any changes in form or substance which the witness desires to make shall be entered upon the deposition by Mr. Norman E. Metcalf, with a statement of the reasons given by the witness for making them.

6. That the signing of the depositions as read and corrected by the witness is hereby waived.

7. That Mr. Norman E. Metcalf, after duly certifying the depositions, shall send them by registered mail to the Clerk of the District Court of the United States, Southern [513] District of California, Central Division, for filing.

8. That the cost of the original transcript, exhibits, attendance fees and notary's fees shall be borne in the first instance by plaintiff, but shall be eventually charged as taxable costs to the losing party.

FRED C. BARTON,

being first duly sworn to testify the truth, the whole truth and nothing but the truth, relating to said cause, deposes and says:

Direct Examination

By Mr. Neave:

1Q. What is your full name?

A. Frederick Cornell Barton.

2Q. What is your residence address?

A. 1734 North Meridian Street.

3Q. Indianapolis?

A. Indianapolis, that is right.

4Q. Who are you working for at present?

A. I am supervising mechanical engineering of Allison. Plant 5, Division of General Motors.

(Deposition of Fred C. Barton)

5Q. Where is that?

A. That is located at Maywood, Indiana.

6Q. Were you ever employed by Hayes Brothers, Incorporated of this city? A. Yes, I was. [514]

7Q. When were you employed by them?

A. 1931 through 1936, inclusive.

8Q. What was your work with Hayes Brothers?

A. I was sales engineer in charge of refrigeration, sales, engineering and installation.

9Q. While you were employed by Hayes Brothers did you do any work for the Polar Ice & Fuel Company of Indianapolis? A. Yes, I did.

10Q. I show you a photostat of a letter on the letter-head of Hayes Brothers, dated January 18, 1934 to Polar Ice & Fuel Company, signature being F. C. Barton, and ask whether you can identify the letter?

A. Yes, I can. This is a letter which constitutes a proposal from Hayes Brothers to the Polar Ice & Fuel Company covering a refrigeration installation in their ice storage sales room at 10th and Tacoma, Indianapolis, Indiana.

11Q. Do you recognize the signature to this letter?

A. Yes, sir, that is my signature.

12Q. What was the function of the service station, ice storage station, located at 10th and Tacoma?

A. The function of that station was a storage to keep ice at a temperature below melting where it could be sold through an automatic ice dispenser to the public.

13Q. Was the proposal contained in this letter ever accepted? [515] A. Yes, sir, it was.

14Q. I show you a photostat of an order marked 11749, and ask you whether you recognize it. Before

(Deposition of Fred C. Barton)

you answer that question I want to ask the Notary to mark for identification as Plaintiff's Exhibit 13, the Hayes Brothers' letter of January 18, 1934.

Mr. Neave: Will the reporter please read the last question?

(Question No. 14 read by the Notary.)

A. Did you say 11749?

15Q. Yes, Order Number.

A. Yes, I recognize this as being a purchase order from Polar Ice & Fuel Company accepting my proposal dated Jan. 18, 1934 for the refrigeration installation in their Tacoma and 10th Street plant. That is Tacoma and East 10th.

Mr. Neave: I will ask that the Polar Ice & Fuel Company Order Number 11749 be marked as Plaintiff's Exhibit No. 14 for identification.

16Q. Will you state whether or not the equipment mentioned in Plaintiff's Exhibits 13 and 14 was ever installed in the Polar Service Station?

A. Yes, sir, it was installed.

17Q. I show you what appears to be a photostat of a bill, No. R1155, dated 3/31/34, and ask you whether you can identify what it is. [516]

A. Yes, sir. This is a Hayes Brothers' invoice for payment of refrigerating installation in the Tacoma and East 10th Street plant of Polar Ice & Fuel.

18Q. I notice that on this page there is mentioned the Order Number 11749. I will ask you whether that is the Polar Ice order, Plaintiff's Exhibit 14?

A. Yes, sir, that is the same order.

Mr. Neave: I will ask that the Hayes Brothers' bill be marked Plaintiff's Exhibit 15 for identification.

(Deposition of Fred C. Barton)

19Q. I show you what appears to be a photostat of a bill of Hayes Brothers, No. R1156, and ask you if you can identify it.

A. Yes, sir. This is an invoice from Hayes Brothers to Polar Ice & Fuel Company covering the difference in cost between a capacitor type motor and a split phase motor that was furnished and installed in place of the original motor in the Tacoma and 10th Street plant of Polar Ice & Fuel.

20Q. Why was this change made in the installation?

A. This change was made at the request of Polar Ice & Fuel because the split phase motor caused radio interference and the capacitor type motor eliminated that interference.

Mr. Neave: I will ask that this bill No. R1156 of Hayes Brothers be marked as Plaintiff's Exhibit No. 16 for identification.

21Q. Will you state whether or not this installation was made [517] prior to the dates of these bills, Plaintiff's Exhibits 15 and 16?

A. Yes, sir, the installation was made prior to those dates.

22Q. Can you describe to me what this installation consisted of?

A. Yes, sir. This installation consisted of a McQuay unit cooler suspended in one corner of the ice storage room, and connected through suitable refrigerant piping to a Frick methyl chloride combined refrigerating unit installed outside the storage room in a lean-to structure.

(Deposition of Fred C. Barton)

23Q. What did you have to do personally with this job?

A. I made the original contact with Mr. Lamar.

24Q. Who was Mr. Lamar?

A. Chief Engineer of Polar Ice & Fuel, to try to obtain this business. At Mr. Lamar's request, I measured the installation, inspected insulation, calculated heat loss, and designed the refrigeration installation. I made additional contacts with Mr. Lamar which resulted in obtaining requisition covering this installation. I then purchased necessary equipment, made necessary sketches, supervised the entire installation, testing, balancing, and placing same in operation.

25Q. Who did the actual work of installation under your supervision?

A. Mr. Herbert Hayes was our erection engineer on that [518] job.

26Q. Were the Hayes Brothers' bills paid promptly for this work? A. They were not.

27Q. Why not?

A. The installation was unsatisfactory.

28Q. I show you photostat of a copy of a letter dated May 2, 1934 from Polar Ice & Fuel Company to Hayes Brothers, and ask you whether you recognize it?

A. Yes, sir. This was a letter to Hayes Brothers from Polar Ice & Fuel Company confirming Mr. Lamar's conversation that the refrigeration installation in the Polar Ice Station at Tacoma Avenue and 10th Street was unsatisfactory and that we were requested to remove same at once.

29Q. Is the letter written to your attention?

A. Yes, sir.



(Deposition of Fred C. Barton)

30Q. You remember having received it?

A. Yes, sir, I do.

Mr. Neave: I ask that it be marked as Plaintiff's Exhibit 17 for identification.

31Q. What did you do as a result of this complaint?

A. Shortly after this complaint was received Mr. Joseph Hayes, of Hayes Brothers, returned from Miami, Florida, and he and I made an inspection of this installation.

32Q. What did you find when you inspected the installation? [519]

A. We found that the installation was not maintaining satisfactory temperatures on account of excessive frost and ice on the cooling unit.

33Q. What did you do to remedy the difficulty?

A. As I recall, Joseph Hayes questioned the Polar Ice Station operator and determined that he was defrosting the unit with an ordinary garden water hose. Mr. Joseph Hayes then suggested that I design perforated pipes over cooling coils that would accomplish this result without all of the slop and water running over the storage room.

34Q. Was this done? A. Yes, sir.

35Q. Who made the actual installation?

A. Mr. Herbert Hayes.

36Q. Under your supervision?

A. Under my supervision, yes, sir.

37Q. When was the change in the installation made?

A. It must have been made within a couple of weeks after Joe and I made that inspection.



(Deposition of Fred C. Barton)

38Q. Will you describe exactly what changes were made in the installation?

A. An installation consisting of perforated pipes was installed over each of the cooling coils in the McQuay unit cooler. These pipes were connected to a common header, and supplied with city water through a suitable city water line [520] provided with a stop and waste valve to turn sprays on when frost conditions required and drain piping out to prevent freezing. The drip pan on the McQuay unit was connected with suitable drain piping through a suitable trap to prevent re-entrance of outside warm air in the cold storage room, and same was piped to waste.

39Q. I show you a photograph and ask you whether you can identify the subject.

A. Yes, sir. That is a photograph inside the Tacoma and 10th Street Polar Ice Service Station looking toward the south end, showing the McQuay unit cooler and its piping and defrosting connection.

Mr. Neave: I ask that it be marked as Plaintiff's Exhibit No. 18 for identification.

40Q. I show you another photograph of the same McQuay unit cooler as shown in the previous exhibit, showing McQuay unit cooler suspension, refrigerant connection, supply defrost water line and headers into defrosters, McQuay drip pans and drain connection from same.

Mr. Neave: I ask that this be marked as Plaintiff's Exhibit No. 19 for identification.

41Q. Would you be good enough to mark on Plaintiff's Exhibit 19 an arrow pointing to the pipe to which I am

(Deposition of Fred C. Barton)

now pointing, and the end of the arrow marked "A," so as to identify that particular pipe? [521]

A. Yes, sir.

42Q. Now will you tell me what was the purpose of this pipe?

A. That is the city water supply line to the perforated header over cooling coils for defrosting purposes.

Mr. Lyon: I think at this time I would like to have the record show present at the taking of these depositions, equipped with the exhibits, is Mr. A. G. Loeffel, Chief Engineer of Marlo Coil Company of St. Louis, Missouri.

43Q. As I understand it, the top end of this pipe "A" goes to the shower pipes over the coils. Is that correct?

A. That is correct.

44Q. Where does the other end of the pipe go?

A. The other end of the pipe goes to the city water supply located in a pit outside of the cold storage room. Is that satisfactory?

45Q. It is, if it is correct.

A. It is correct. I wondered if you wanted any more details on that pipe.

46Q. That is sufficient. Will you please mark with a "B" the pipe to which I am now pointing?

A. Yes, sir.

47Q. Will you tell me what this pipe is?

A. Pipe "B" is the drain connection from the McQuay unit cooler drip pan to waste, the water sewer. [522]

48Q. I show you a third photograph and ask you whether you can identify it.

A. Yes, sir. That is the south or rear end of the Polar Ice Service Station at 10th and Tacoma, showing the lean-to building enclosing the Frick refrigeration unit.

(Deposition of Fred C. Barton)

49Q. Does it appear to be in the condition in which you saw it in 1934 when this unit was installed?

A. No, sir, it was a new structure then. It looks in pretty bad shape here.

Mr. Neave: I will ask that this be marked as Plaintiff's Exhibit 20 for identification.

50Q. I show you a fourth photograph and ask you whether you can identify it. A. Yes, sir, I can.

51Q. What is it?

A. It is the Frick refrigeration unit together with its piping installed in the Tacoma and 10th Street service station of Polar Ice & Fuel Company.

Mr. Neave: I will ask that it be marked as Plaintiff's Exhibit 21 for identification.

52Q. Am I correct in my understanding that this Frick unit comprises a compressor and a condenser?

A. That is correct.

53Q. And a motor? A. And a motor. [523]

54Q. Will you please mark with a "C" the compressor, with a "D" the condenser, and with a "E" the motor?

A. "C" compressor, "D" condenser?

55Q. Yes. A. "E" motor?

56Q. "E", the motor. A. Yes, sir.

57Q. Now you testified with respect to Plaintiff's Exhibit 19 that the pipe marked "A" was the water pipe going to the shower pipes over the coils. Would you please identify this pipe "A" on Plaintiff's Exhibit 21, if it is there? A. Yes, sir. It is this pipe.

58Q. Will you mark it, please?

A. What, "A"?

59Q. Mark it "A", yes. A. Yes, sir.

(Deposition of Fred C. Barton)

60Q. On Plaintiff's Exhibit No. 19 you marked the waste pipe "B". If you find the same waste pipe on Plaintiff's Exhibit 21 will you please so mark it?

A. Yes, sir.

61Q. With respect to this waste pipe "B" I notice that to the right of the place you have marked "B" on the photograph there is a curve in the pipe. What is that?

A. That is a trap consisting of pipe and fittings in which water is trapped to prevent the re-admission of hot air [524] from the outdoors into the cold storage room.

62Q. Where does the waste from pipe "B" go?

A. The waste water from pipe "B" drains out on compression room floor slab.

63Q. Will you please indicate by the letter "F" the place where water comes from the city main?

A. Yes, sir, it is down in that little pit, comes out of the floor.

64Q. Just above the letter "F" that you have placed on Plaintiff's Exhibit No. 21, there appears to be some sort of a valve. Will you tell me what this valve is?

A. Yes, sir. That is a conventional drain and waste valve.

65Q. What is the function of a drain and waste valve?

A. The function of a drain and waste valve is to shut off the flow of city water to the system and drain all water in that system out to prevent freezing.

66Q. When the water is shut off by the closing of the valve what happens?

A. The valve uncovers a port leading to the discharge side of the valve, permitting the water on the discharge

(Deposition of Fred C. Barton)

side of the valve to drain through this port and out a tubing.

67Q. There seems to be a protuberance from the edge of the valve. What is that sticking out?

A. That is a piece of tubing from which the water [525] drained back out of the system flows.

68Q. Will you please mark this valve with the numeral "1"?      A. Yes, sir.

69Q. Will you please describe the course which the water takes when valve "1" is opened, making appropriate markings on the photograph so that we can follow your description?

A. Water flows from this valve through two circuits, one of which is the supply water line, identified as line "2", from where water flows through valve "3", into automatic regulating valve "4", from there to inlet of water cooled condenser "D", flowing inside of inner tubing and condenser "D" to a point "5", where water leaves compressor and flows down through pipeline "6" to the sewer.

70Q. You have stated that there were two water systems, and now you have described one. Will you trace the second, please?

A. The second circuit branches from tee at location "7", flows through valve "8", continuing through line "A" to perforated water headers over coils.

71Q. I think that you had better make another identification for valve "8" and put the number out here, because I cannot read it.      A. Yes, sir.

(Deposition of Fred C. Barton)

72Q. Referring again to Plaintiff's Exhibit 21, what is [526] the nature of valves "8" and "3"?

A. The function of valve "8" is to shut off the flow of water to the defrosting header when refrigeration unit is in operation. The function of valve number "3" is to shut off the flow of water to the refrigerating condensing unit when valve "8" is open for defrosting.

73Q. What kind of valves are these, simply valves that open and close the line?

A. Those are conventional standard gate valves.

74Q. Will you state whether or not this picture, plaintiff's Exhibit 21, correctly shows the arrangement of piping, valves, and layout, together with the condenser and compressor as it was installed under your supervision in 1934?

A. To the best of my memory, that is the arrangement that was installed at that time.

75Q. Did you ever operate this system?

A. Yes, sir.

76Q. When was that?

A. After the defrosting installation was made I operated this system to test and be certain same functioned satisfactorily and to illustrate to the plant operator and Mr. Lamar how same functioned.

77Q. Did it function satisfactorily to defrost the unit?

A. Yes.

78Q. Will you state whether or not the accumulated frost [527] on the unit was removed by the water spray?

A. The frost and ice was successfully removed from the coils with this spray.



(Deposition of Fred C. Barton)

79Q. How long did it take to defrost the unit?

A. Approximately ten minutes.

80Q. What temperature were maintained by this unit in the ice storage room?

A. Approximately 30 degrees. The compressor was set to a cycle between 28 and 30 degrees.

81Q. How do you know that this temperature was maintained?

A. To satisfy the purchaser, I conducted a test, using six Bureau of Standards calibrated mercurial thermometers suspended in ice storage room, reading temperatures over a period of time

82Q. What did these tests show?

A. These tests proved that the temperatures maintained by this installation were 30 degrees or less.

83Q. Do you know whether the Polar Ice & Fuel Company paid for the installation?

A. Yes, sir, they did.

84Q. After making this installation did you ever see it again?

A. Yes, sir.

85Q. What was the occasion for your seeing it again? [528]

A. It was my habit to visit all of my installations periodically to determine if they were operating satisfactorily, and particularly in this case, where we had had trouble, I wanted the good will of Polar Ice & Fuel Company for future business.

86Q. In what year did you last see this installation?

A. 1936.



(Deposition of Fred C. Barton)

Cross Examination

By Mr. Lewis Lyon:

recently. A. No, sir.

87Q. You have not, Mr. Barton, seen this installation?

88Q. Why not? A. I had no reason to see it.

89Q. Is the installation still in existence?

A. I don't know.

90Q. You have not tried to find out?

A. No, sir.

91Q. When is the last time that you did try to find out, if at any time?

A. When I was still associated with Hayes Brothers. That would be in '36.

92Q. You do not know whether the installation is operating now or not? A. No, sir, I don't. [528]

93Q. You have made no effort to determine that fact?

A. No, sir.

94Q. The installation, according to your testimony, was made here in this city, was it?

A. Yes, sir.

95Q. What are you now doing, Mr. Barton?

A. I am general foreman and supervisory mechanical engineer, Allison Division, General Motors.

96Q. Where?

A. At their Plant 5, Maywood, Indiana.

97Q. You are acquainted with Mr. Loeffel here in the room, are you, Mr. Barton?

A. I have met Mr. Loeffel.

98Q. When did you first become acquainted with him?

A. I met Mr. Loeffel years ago when I was in the refrigeration business. I have recently met him again here in Indianapolis.

(Deposition of Fred C. Barton)

99Q. When?

A. Some time after the middle of last year.

100Q. Did you supply to Mr. Loeffel the photographs which you have here identified?      A. No, sir.

101Q. Did he supply copies of those photographs to you?      A. No, sir.

102Q. Where did you get them? [530]

A. I don't have them.

103Q. Where did you first see the photographs that have been presented to you here?

A. When they were shown to me by Mr. Goldsmith, local patent attorney.

104Q. When?

A. That was shortly after the middle of last year.

105Q. Shortly after you saw Mr. Loeffel?

A. Yes, sir.

106Q. Was Mr. Goldsmith working for the Marlo Coil Company?      A. I don't know.

107Q. Was Mr. Goldsmith introduced to you by Mr. Loeffel?

A. No, sir. Mr. Goldsmith and I were directors on the old Indianapolis Engineering Society.

108Q. And you first saw these photographs when they were presented to you by Mr. Goldsmith, is that correct?

A. Yes, sir, that is correct.

109Q. Do you remember the time?

A. Not accurately. It was shortly after the middle of last year.

(Deposition of Fred C. Barton)

110Q. What was the occasion of the presentation of these photographs to you? What was said by Mr. Goldsmith?

A. Mr. Goldsmith explained that he had been retained as patent attorney in a case involving litigation pertaining [531] to a refrigeration defrosting system.

111Q. You did not ask Mr. Goldsmith who he was retained by? A. No, sir.

112Q. Did he say there was pending litigation?

A. Yes, sir.

113Q. When was that?

A. That was at this same meeting shortly after the middle of last year.

114Q. What do you mean by the "middle of last year"?

A. Well, my memory is not too accurate. It must have been in June or July of last year. I don't have a diary.

115Q. You don't remember which it was, whether it was June or July? A. No, sir, I don't.

116Q Did you ever check these photographs against the actual installation? And I mean by "these photographs" these exhibits which you have here identified. A. No, sir.

117Q. Did you make any effort to check the photographs against the installation? A. No, sir.

118Q. Do these photographs show any change of any kind or character in the installation which you say that you inspected in 1934? [532]

A. I know of no major changes. This installation was so indelibly imprinted on my mind due to the trouble—

119Q. (Interposing) Just answer the question. I am asking about changes.

A. I know of no major changes since the original installation.

(Deposition of Fred C. Barton)

120Q. Do you know of any changes of any character?

A. I note one in which the capacitor type motor, which was installed after the original installation, has been removed, because there is now a split phase motor on the unit.

121Q. You do not know when that change was made?

A. No, sir.

122Q. Do you note any other change that was made in this installation?

A. I see no other changes from the original installation. That statement was that this entire installation was indelibly imprinted on my mind due to this being such a headache and a source of so much trouble.

123Q. To your mind do these photographs show what you call this cold storage room in operation?

124Q. Here are all of them.

A. I see no evidence the refrigeration unit is actually in operation. I do see ice in storage. [533]

125Q. I refer you to Plaintiff's Exhibit No. 18 for identification, and I will ask you to look at the McQuay ceiling type coil unit and determine whether or not that coil unit is frosted up.

A. From the appearance of the photograph, the coil is frosted.

126Q. Now I will ask you to look at this photograph, Exhibit 18, referring to this bottle on the floor, which I will mark "X". Tell me if that is not a bottle of water.

A. That bottle appears to contain a liquid. It would be impossible to state what the liquid is.

(Deposition of Fred C. Barton)

127Q. Is it not also true, Mr. Barton, that this structure which is here in the corner, and which I will mark "Y" is a water cooler?

A. Yes, sir, "Y" is a water cooler.

128Q. The function of that is to cool water and not to make ice, is that right? A. Yes, sir.

129Q. And that is located in this so-called cold storage room, is it not? A. Yes, sir.

130Q. Now, Mr. Barton, referring to this photograph, Exhibit 21,—you are an engineer, are you not?

A. Yes, sir.

131Q. Will you make me a drawing of this valve which you [534] have marked in this photograph as valve "1"? I will supply you with a piece of yellow paper for that purpose.

A. I take it you want a section of this valve.

132Q. That is right.

A. (After making sketch) I think that is a crude sketch of that type of valve.

133Q. That is the best sketch you can make of that valve is it? A. From memory, yes, sir.

134Q. It shows the complete structure, does it?

A. Not the complete structure. There is no detail or packing gland or the method the drain port is uncovered, which is indicated as dotted when the disc shuts off against the in-coming water.

The Court: What is he talking about? I haven't got a copy of that here.

Mr. Lyon: It is my exhibit. We will produce such a sketch.

(Deposition of Fred C. Barton)

(The document referred to was handed to the court.)

The Court: All right.

Mr. O'Hearn: Would you like to have that answer read again?

The Court: Yes, read it.

A. Not the complete structure. There is no detail of packing gland or the method the drain port is uncovered, which [535] is indicated as dotted when the disc shuts off against the in-coming water.

135Q Is that as complete as you can make the sketch, Mr. Barton?

A. No, sir. An engineering drawing takes time and equipment.

136Q. Is there any part or function you have left out of this sketch?

A. I know of no major part left out of it. It certainly is not complete in details regarding threads and design of packing gland, and so forth.

137Q. Where is the valve seat?

A. The valve seats on a ring in the lower portion of the valve.

138Q. You have just, at my request, or in answer to the last question, marked that ring as "Valve Seat," have you? A. Yes, sir.

139Q. What structure is it that seats upon this valve seat? Will you mark that?

A. That is marked as "Valve Disc."

140Q. And that valve disc shows the approximate size of that valve disc with relation to the seat, does it?

A. Yes, sir.

(Deposition of Fred C. Barton)

141Q. And the approximate location of the valve disc with respect to the valve seat, is that correct? [536]

A. When same is closed, yer, sir.

142Q. When the valve is closed? A. Yes, sir.

143Q. That valve disc is shown in correct position with what you have marked on the sketch as "port", is that correct?

A. No, sir, "Port" is above the disc when disc is closed.

144Q. Let us get the port in in the right position then. That port then is just a hole in the wall of the valve, is that correct? A. In the design of some valves it is.

145Q. I am asking about this one.

A. I haven't seen the interior of this particular valve.

146Q. You never saw the interior of this particular valve? A. No, sir.

147Q. Is that correct? A. That is right.

148Q. Whose make was this valve?

A. I don't know. It was purchased locally from a plumbing supply concern.

149Q. Are there any records available of any character or in any place of the purchase of this valve?

A. Not this specific one valve, since it was practice to order those in quantities. [537]

150Q. Is there any purchase order or records of any kind showing the purchase of any of the pipes, valves, or structures which you state were used in changing over this unsatisfactory Polar Ice installation into the structure that you now assert it to have been?

A. Some types of parts are common stock parts, in the Hayes Brothers' stock room, they would not be purchased individually for this installation.



(Deposition of Fred C. Barton)

151Q. Was there ever any bills made or rendered to the Polar Ice Company for these parts which you state were taken from stock and installed in this particular job?

A. Not to my knowledge.

152Q. Was there any charge ever made to the Polar Ice Company for making this conversion of this unit from one type of structure to another? A. I think not.

153Q. You merely did that on your own volition, is that correct?

A. We did that at Lamar's threat to remove the equipment, so we could collect for same.

154Q. There are no bills or documents of any kind existant to show the changes which were made in the original installation after this letter of May 2, 1934, Plaintiff's Exhibit No. 17 for identification?

A. Not to my knowledge. [538]

155Q. You never received any communication from Polar Ice & Fuel Company with reference to this particular installation in writing after this letter of May 2, 1934, is that correct?

A. Is your question "letter", or any communication?

156Q. Any communication in writing.

A. We received payment for the installation.

157Q. Do the records of Hayes Brothers show when that payment was made, do you know?

A. I am reasonably certain they do, yes, sir.

158Q. Do you have any recollection on when payment was made?

A. As I recall, pymment was made within 30 days after the installation was corrected.

(Deposition of Fred C. Barton)

159Q. Can you recall the month and year when that payment was made?

A. After my memory refreshed by looking at photo-static copy of Hayes Brothers invoices, I would say it was in June or July, 1934.

160Q. You personally have no knowledge of that fact then, of the date of payment, except by having someone show you what they stated to be a payment for that job?

A. I have knowledge of the general transaction and installation in 1934; the specific days and dates would be rather difficult to recall now. [539]

161Q. Referring to this letter, Plaintiff's Exhibit No. 17 for identification, do you recall whether the letter you say you received was signed or not?

A. I don't remember whether that was signed or not.

162Q. Do you know whether that letter was on the letterhead of any concern or on any letterhead?

A. Not for certain, no.

163Q. Do you have any knowledge, Mr. Barton, as to whether what appears to be a copy here, Plaintiff's Exhibit 17, is itself a photostat of the letter you actually received?

A. It appears to be, because Mr. Lamar definitely stated that he would confirm the conversation relative to the removal of the equipment.

164Q. You do not recall whether that letter that you actually received was either signed or on the letterhead of the Polar Ice & Fuel Company?

A. I don't remember that very clearly now.

165Q. Had you ever received any earlier correspondence from the Polar Ice & Fuel Company?

A. Pertaining to other business?

(Deposition of Fred C. Barton)

166Q. Yes. A. Yes, sir.

167Q. Was it not always the practice of that company to write on their own letterhead paper?

A. Yes, sir, unless Mr. Lamar in some of his outlying [540] plants dictated his correspondence from them.

168Q. Do you ever recall receiving any letter from Mr. Lamar which was not signed? A. No, sir.

169Q. Do you have any knowledge, Mr. Barton, of when the photographs, Plaintiff's Exhibits 18, 19, 20 and 21 were taken?

A. Only on another person's statement.

170Q. You have no knowledge yourself?

A. No, sir.

171Q. You were not present when they were taken?

A. No, sir.

172Q. Have you any records, Mr. Barton—you state you made certain temperature tests of this cold storage room—have you any record of those tests?

A. I do not have now. All my calculations and engineering and test data was retained by Hayes Brothers when I left them.

173Q. You have not seen that engineering data since then? A. Not since '36.

174Q. Did you ever experience, Mr. Barton, any tendency of any of the water pipes "A" or "B" in this structure to freeze up?

A. Not within the cold storage room during summer operation. [541]

175Q. Did you ever inspect what you say were the spray header pipes which you installed over the coils in the McQuay ceiling type unit? A. Yes, sir.

(Deposition of Fred C. Barton)

176Q. Did you ever notice these spray pipes freezing up?

A. No, sir, because they were perforated with holes in the bottom of them.

177Q. There was no tendency that you observed of these pipes to freeze?

A. No, sir. The instructions in the operation of the unit was after the defrost cycle that the fan be operated for a period of time to dry out the coil and the headers before refrigeration was turned back on.

178Q. For how long was the instructions to blow out the spray pipes before the refrigerant was returned to the coils?

A. As I recall, the spray cycle operated approximately five minutes washing the frost from the coils. Then the spray water was turned off and the fan cooler operated about five minutes without refrigeration to dry the unit out.

179Q. Do you remember the appearance of the inside of this storage room when this installation was made, Mr. Barton?

A. As I recall, it was a lumber finished interior with a glandular insulation between that and the exterior walls.

180Q. Do you remember the interior appearance of the lumber when this installation was made? [542]

A. You mean as to its shape, or quality, or deterioration or what?

181Q. That is correct.

A. When the installation was made the interior lumber was in good condition. I inspected that to be certain the unit had capacity to handle the job.

(Deposition of Fred C. Barton)

182Q. I refer you to Plaintiff's Exhibit 18 for identification. I refer you to the obvious deterioration of the interior wood as I have noted on that photograph at the places which I am making "W" in that photograph, and ask you if it is not a fact that that is water rot of that wood?

A. My opinion would not be of any value as to what type of failure that is, but obviously the lumber in that room has deteriorated considerably over the original installation.

183Q. You could not state or have no idea from your experience as to whether that is water rot or some other rotting or deterioration of the wood, is that correct?

A. From the appearances of this photograph, no. It could be caused by undue stresses, it could even be caused by the settling of that particular section of the wall. You see that fracture extends vertically.

184Q. I will also refer you to a section in the ceiling, which I will mark "Z" and ask you if that does not show a similar deterioration at that point?

A. Yes, sir, it does. [543]

185Q. I will also refer you to Plaintiff's Exhibit No. 18 and ask you to observe the condition of the opposite wall, and ask you if there is no evidence that of similar deterioration of the interior lumber structure, which I will mark "AA", on one side of the door, and ask you if there is not similar evidence of deterioration on the opposite side of the door?

A. Yes, sir, there is.

186Q. Was there a vestibule to this cold storage room, Mr. Barton?

A. No.

(Deposition of Fred C. Barton)

187Q. Where was the ice delivered?

A. At that time the ice was delivered on a platform outside of the entrance door, and loaded through that door into the room.

188Q. There is no photograph here showing that structure, is there?           A. No, sir.

189Q. Did you ever observe the operation of this ice house under conditions of loading with ice?

A. No, sir.

190Q. You have no idea then what the temperature rise was that took place during the period of time that the box was being loaded with ice?           A. No, sir.

191Q. You stated, Mr. Barton, that you made sketches of [544] this installation. Have you those sketches?           A. No, sir.

192Q. Do you know where they are?

A. I wouldn't have the slightest idea. They could be in the engineering files of Hayes.

193Q. When did you last see them?

A. Shortly after the work was completed.

194Q. You stated that there was difficulty encountered in the operation of this original unit because they used an ordinary garden hose in an effort to wash the frost from the coils and it left the slop in the ice room. Is that correct?

A. Yes, sir.

Mr. Lyon: That is all.

Mr. Neave: Do you intend to offer in evidence the drawing the witness made, Mr. Lyon?

Mr. Lyon: Your Honor, I will ask that it be received in evidence as a part of the evidence, and as an illustration of the witness' testimony, as Defendant's Exhibit next in



(Deposition of Fred C. Barton)

order. It is marked Defendant's Exhibit A in this deposition.

The Court: Is it there?

Mr. Lyon: It is with the deposition.

The Court: It is with the deposition?

Mr. O'Hearn: Yes, it should be, your Honor. Yes, here it is.

The Court: The whole deposition will go in evidence and [545] this will go in as a part of the deposition. It will not be marked as a separate exhibit.

Mr. Lewis Lyon: I didn't get your Honor's statement.

The Court: The whole deposition will go in evidence. This will go in as a part of the deposition, without making or giving it any separate identifiable number.

Mr. Neave: Of course, all of our deposition exhibits are numbered Plaintiff's Exhibits No. So-and-so.

The Court: Yes.

Mr. Neave: I would like to have copied into the record the entire redirect examination of this witness, and I shall read it.

#### Redirect Examination

By Mr. Neave:

195Q. Mr. Barton, referring to Defendant's Exhibit "A", would you be good enough to describe the operation of this valve when the valve is closed, referring to the legends you have marked on the drawing?

A. The function of the valve when the valve is closed is the valve disc is seated against the valve seat.

196Q. As shown in the drawing?

A. As shown in the drawing, stopping flow of water from the inlet side of valve.



(Deposition of Fred C. Barton)

197Q. Is that the righthand side on the drawing?

A. Yes, sir. And opening drain port located above [546] valve disc.

198Q. Is that round, where it is shown on the drawing?

A. The circle shown on the drawing.

199Q. How does the draining water get to that port opening?

A. It drains by gravity from the discharge side of the valve down through the valve body across the top of the valve disc and out of the port.

200Q. Is the discharge side of the valve the lefthand side of the valve in the drawing?

A. Yes, sir.

201Q. You referred to a Mr. Lamar who was the engineer of the Polar Ice Company. Do you know whether or not he is still alive?

A. I have the report he is dead.

202Q. You mentioned the fact that you recalled this installation vividly because it was a headache and source of trouble. What was the headache and source of trouble you were referring to?

A. Unable to maintain temperatures through excessive frost on the unit, and repeated 'phone calls by Mr. Lamar to straighten the job out or take it out.

203Q. Was the job straightened out?

A. Yes, sir.

204Q. Were there any headaches or troubles thereafter?

A. No, sir. [547]

(Deposition of Fred C. Barton)

205Q. How was it straightened out?

A. It was straightened out by installing this water defrosting system to take the frost and ice off the coil.

206Q. Did you have any complaints with respect to the operation of this unit during the period of inspection which you made after the installation was complete and paid for?

A. No, sir.

207Q. In the normal operation of this unit when it was operated as instructed by you, what would be the condition of the coil just previous to the defrosting operation?

A. The coil fins would be heavily coated with frost to an extent that they reduced the air flow through the unit cooler materially.

208Q. Have you any knowledge as to the temperatures now maintained by this unit in the refrigerating room of the service station at 10th and Tacoma?

A. No, sir. I don't even know if it is in operation.

209Q. What was your knowledge as to the refrigerating conditions maintained after you made the installation and during your period of inspection?

A. My recollection is that the condition maintained had to be below freezing because the reason this equipment was purchased was to prevent the blocks of ice that were vended through an automatic vending machine from melting and sticking together, and had they melted and stuck together the unit would [548] have been unsatisfactory again, and we would have received a complaint.

210Q. Did you receive any such complaint?

A. No, sir.

(Deposition of Fred C. Barton)

211Q. What are stop and drain valves, such as you drew on Defendant's Exhibit "A", ordinarily used for in plumbing practice?

A. They are conventionally used as the city water service valve in residences, generally installed in basements. Their function is when the water is shut off to the house they drain the pipe in to prevent freezing.

212Q. In view of the condition of the building as shown in Plaintiff's Exhibits 18 and 19, have you a sufficient basis to express any opinion as to whether the unit which you installed would be able to maintain freezing temperatures within the refrigerating room?

A. That opinion would not be conclusive because no knowledge of the moisture condition and the insulation immediately behind the interior woodwork is shown.

Mr. Neave: That is all.

The Court: Any further cross examination?

Mr. Lyon: I have no more cross.

The Court: That is all of his deposition.

Mr. Neave: That is all of his deposition.

The Court: I will give you a short recess. [549]

(A short recess was taken.)

Mr. Neave: The next deposition is that of Mr. Hayes, Herbert E. Hayes, and I offer the direct testimony of Mr. Hayes. Mr. Herbert E. Hayes is the one who made the actual installation that Mr. Barton described.

The Court: He so testified.

Mr. Neave: Yes, and he described the installation, referred to the photographs, described the piping and the

valves, and so forth. I will read only a short portion of the deposition on page 68, at the top of the page.

"102Q. After completing the installation did you make any tests of the temperatures inside the refrigerating space?

"A. After I put the defroster on?

"193Q. Yes.

"A. I did.

"104Q. What did you find?

"A. I found out I was able to hold a temperature in the neighborhood of 28 degrees in there.

"105Q. Do you recall who was operating the plant at the time that you put in this water defrosting installation?

"A. I can only guess at it. I think his name was Martin.

"106Q. Did you give any instructions to anybody [550] as to the manner of operating the unit when you had completed the installation?

"A. I did.

"107Q. Who did you give those instructions to?

"A. This Mr. Martin.

"108Q. After making this installation and giving these instructions did you ever return to the installation in order to inspect it?

"A. I did.

"109Q. What did you find?

"A. Well, I don't know that I found anything, other than rechecking the job.

"110Q. Were there any complaints as to its operation?

"A. No, not at that time."

Now, I don't think it will be necessary for me to read anything further from that deposition.

The Court: Do you offer it all in evidence?

Mr. Neave: Yes, sir, all of the direct.

The Court: Do you have cross examination, Mr. Lyon?

Mr. Lewis Lyon: I will offer the cross examination, your Honor. There are some points of the cross examination that I desire to direct the court's attention to at the present time, beginning upon page 81, question 173. I will have to go back before that.

The Court: Let me see it. [551]

Mr. Lewis Lyon: On page 81.

"172Q. Do you know that the temperature of the room is now?

"A. No.

"173Q. Or when you were there this morning?

"A. No, sir.

"174Q. Do you know whether it was above or below freezing?

"A. I would say it was above freezing.

"175Q. Did you inspect the ice that was in there?

"A. No, sir.

"176Q. Do you know whether it was dry or not?

"A. No, sir.

"177Q. As a matter of fact, you do know it is not necessary for it to be below freezing for the ice to be dry enough to pass through the dispensing machine?

"A. No, sir, I don't know that.

"178Q. You did not know that?

"A. No, sir.

"179Q. You believe it has to be below freezing

"A. To hold it?

"180Q. In order for the ice to pass satisfactorily through the ice dispensing machine.

"A. That I wouldn't know.

"181Q. You don't know? [552]

"A. No, sir."

Then on page 88—

The Court: On page 82 about the wood rot—oh, he said he doesn't know anything about it?

Mr. Lewis Lyon: He said he didn't know anything about the wood rot, I believe, this witness. On page 88: With respect to the pipe, as viewed in the photograph, beginning with question 213:

"213Q. Is it not true, or do you have any knowledge of the direction in which the pipes which you say you have marked "A-1", "A-2", and "A-3", in Plaintiff's Exhibit 19, extend into coil unit?

"A. It extends into the housing of the unit.

"214Q. Are they horizontal or inclined?

"A. I don't know.

"215Q. You have no idea?

"A. No, sir.

"216Q. You have no idea what they were when the installation was made?

"A. No, sir.

"217Q. You do not know whether they were placed in a definite horizontal position or were inclined, is that correct?

"A. They should have been inclined.

"218Q. How could they be inclined?

"A. I don't know.

"219Q. You never looked at them?

"A. No, sir."

That, as far as I recall at the present time, covers the points which I desire to point out in the cross examination of this witness, but I will ask that it all be copied, your Honor.

The Court: Very well.

Mr. Neave: I will offer the entire redirect examination. I don't think there is anything I need call your Honor's attention to just at the moment with respect to it.

Mr. Lewis Lyon: I don't believe the recross examination needs to be put in, your Honor. There is no reason for copying it in the record.

The Court: There are only two questions. You might just as well put them in and you will have them there to argue about, if you want to.

Mr. Lewis Lyon: All right.

HERBERT E. HAYES,

being first duly sworn to testify the truth, the whole truth, and nothing but the truth, relating to said cause, deposes and says:

Direct Examination

By Mr. Neave:

1Q. What is your full name, Mr. Hayes? [554]

A. Herbert E. Hayes.

2Q. Your residence address?

A. 818 East 55th Street.

3Q. Indianapolis? A. Indianapolis.

4Q. Where are you employed at the present?

A. Johnson Service Company.

5Q. Where is that?

A. 333 North Pennsylvania Street, Architects Building.



(Deposition of Herbert E. Hayes)

6Q. Indianapolis? A. That is right.

7Q. Were you ever employed by Hayes Brothers of this city? A. I was.

8Q. Do you recall when you were employed there?

A. Yes, from 1912 to 1940.

9Q. While you were there did you ever do any work on a job for Polar Ice & Fuel Company?

A. I did.

10Q. Where was that work that you did, you recall?

A. Tenth and Tacoma Streets, Indianapolis.

11Q. What work did you do there?

A. I installed a Frick ice machine and compressor, also a blower unit.

12Q. What was the place in which you made this installation? [555]

A. Well, it was an ice storage plant.

13Q. How was the ice sold from this plant?

A. Well, they had a trucking system there, and they had automatic machine system.

14Q. By "automatic machine system" what do you mean?

A. That is a coin system, put coins in a machine and certain sizes of ice come out, a 25 or 50-pound piece.

15Q. Would you please describe to me the installation which you made in this building?

A. Well, I installed this ice machine; I installed a Niagara blower, and put them in operation before I left.

16Q. Can you tell me the year in which you installed the Niagara blower?

A. I think it was in 1934.

(Deposition of Herbert E. Hayes)

17Q. Was the installation a successful one?

Mr. Lyon: I object as calling for a conclusion of the witness. A. No, it was not.

18Q. Why not?

A. Well, it couldn't hold temperatures, and the blower kept freezing up all the time.

19Q. What did you do about the fact that you could not hold the temperatures?

A. Well, there was only one thing to do, and that was to try to get the ice off of the blower. [556]

20Q. Before you tried to get the ice off of the blower did you make any change of any of the equipment in the installation?

A. To the best of my knowledge, sometime—I wasn't on the job, I was putting other jobs in in town—I believe the changed the motor from one size to another, and tried that.

21Q. Was there any other change made in the refrigerating unit itself?

A. Not until we changed the type blower. We put another type plower in.

22Q. What kind of blower did you put in?

A. I believe it was McCray.

23Q. Would you please give me a description in some detail of the piping which you installed when you made the original installation of the Frick compressor unit and the Niagara blower? A. That is the first trip?

24Q. The first trip.

A. I installed the compressor and condenser, hung the blower from the ceiling, and then I put a stop and waste on a water cap line they had in a little pit there.

(Deposition of Herbert E. Hayes)

25Q. Where was the pit?

A. The pit was just a little off center in this small room in the rear of the building, about 12x18 inches deep [557] and about 12 inches wide, and removed the cap and put this valve on.

26Q. That was the cap on—

A. (Interposing) The cap on the three-quarter water line that came in there for this ice machine,—although there was no water on this line at that time. I put a stop and waste on that line and came up possible six or eight inches and put an elbow on, and run over, and supplied an automatic water valve on the ice machine.

27Q. What connections were there between the ice machine itself and the blower unit?

A. In regards to water?

29Q. In regard to anything.

A. I had my suction line and my liquid line to my blower, which is an expansion valve on the back of the blower.

30Q. What do you mean by the "liquid line"?

A. The methly chloride.

31Q. That is the refrigerant?

A. Yes, sir.

32Q. Was there any water connection with the blower unit at this time?      A. No, there was not.

33Q. How was the defrosting done at this time?

A. Well, they had two methods,—either turn the machine off and let it down for a length of time, which would [558] defrost itself,—and we found that was not practical, because it was too long; and the next method was just to take the hose and spray it off.

(Deposition of Herbert E. Hayes)

34Q. Do you recall as to whether or not there was any complaint made as to the operation of this unit after you had made the original installation?

A. Yes, there was.

35Q. What was done as a result of this complaint?

A. After they had changed the motor?

36Q. Whenever it was.

A. They had changed the motor at one time, and that didn't work, and I think the next thing they did, they bought a McCray blower, and I went out and took down the Niagara and hang this McCray.

37Q. When you say "they" bought the McQuay blower, who do you mean by "they"?

A. Hayes Brothers.

38Q. To the best of your recollection how long after the original installation was it that you went out and put in the McQuay blower?

A. I will have to take a guess on that.

39Q. What would be your best guess?

A. I would say 60 to 90 days; it might have been longer.

40Q. Can you tell me what year that was in? [559]

A. That was in 1934.

41Q. Tell me just what you did when you took out the Niagara unit and substituted the McQuay unit. What connections did you make?

A. Other than was originally in? Is that the idea?

42Q. That is right,

A. At first when I put the McCray blower in we tried it out and we found out later on it was frosting up. Then I went back and put this spray system in there.

(Deposition of Herbert E. Hayes)

43Q. Put the spray system in? A. Yes.

44Q. What year was it when you put the spray system in? A. 1934.

45Q. When you put the spray system in what type connections did you make?

A. Well, I removed that elbow that I had in the pit there going to my ice machine and replaced that with a tee. That gave me an opening out of the top. I raised up possibly three or four inches and put the elbow up there. I ran from that point there over to the wall and into the cooler, and from there up to a small header I had on the McCray unit with a three pipe sprayer.

46Q. What valves, if any, did you place in this line?

A. I placed a one-half inch valve in the half inch line going to the spray head, and a half inch valve in front [560] of my automatic water valve in front of the ice machine.

47Q. Where were these valves with reference to the refrigeration room? Were they inside the refrigeration room or outside?

A. They were outside, in the room that was designed for the equipment. There was also a <sup>waste</sup> ~~feste~~ line I put in there, as far as piping is concerned. I put in an inch and a half waste line from the pan to bring the water out into this little shed, with possibly a 10-inch seal in the line.

48Q. What was the purpose of the seal?

A. To keep the warm air from the outside getting in there.

49Q. Getting into where?

A. Into the cold storage room.

(Deposition of Herbert E. Hayes)

50Q. I show you Plaintiff's Exhibit 18 and ask you recognize what this is a picture of.

A. Yes. That is a picture of the blower I put in that particular room.

51Q. What room is this?

A. The ice storage plant at 10th and Tacoma of the Polar Ice & Fuel.

52Q. Which unit is this?

A. That is the McCray unit.

53Q. I show you Plaintiff's Exhibit 19 and ask if you can tell me what that is a picture of. [561]

A. That is a picture of the same blower.

54Q. At the Tacoma and 10th Street plant?

A. That is right.

55Q. What is the pipe marked "A"?

A. That is the water supply to the sprayer.

56Q. Would you be good enough to mark on Plaintiff's Exhibit 19 the pipes that go into the three headers, the three spray pipes that you stated were over the coils? Would you mark these "A-1", "A-2", and "A-3"?

A. You mean the three spray headers?

57Q. The three spray headers, yes.

A. (Witness does as requested.)

58Q. What is the pipe marked "B"?

A. "B" is the waste line from the pan.

59Q. Where does the waste line go?

A. That goes just outside of the wall with a seal from the pan to the floor.

60Q. I show you Plaintiff's Exhibit 20 and ask you if you can identify this picture. A. I do.

61Q. What is it a picture of?

(Deposition of Herbert E. Hayes)

A. That is the shed built in the back of the storage room.

62Q. Of the plant at 10th and Tacoma?

A. That is right. [562]

63Q. What was the purpose of this shed?

A. For the new equipment to be installed, which houses the ice machine and also the electrical switches.

64Q. I show you Plaintiff's Exhibit 21 and ask you whether you recognize it. A. I do.

65Q. What is it a picture of?

A. That is a picture of the ice machine, the condenser, the waste line, and the water supply lines.

66Q. Referring to Plaintiff's Exhibit 21, what is pipe marked "A"?

A. Pipe "A" is the water supply to the spray header.

67Q. And pipe "B"?

A. "B" is the waste line from the pan to the bottom of the blower.

68Q. Is the trap shown in that pipe "B"?

A. There is.

69Q. Where is it in the picture?

A. Right there.

70Q. Where is that, on the right-hand side of the picture? A. That is right.

71Q. What is the part marked "C"?

A. "C" is above a fitting.

72Q. The whole thing, the whole structure.

A. The whole thing is the compressor. [563]

73Q. What is "D"?

A. "D" is the condenser.

74Q. And "E"? A. "E" is the motor.



(Deposition of Herbert E. Hayes)

75Q. Referring to this photograph, Plaintiff's Exhibit 21, and the lettering and numbering, will you please describe just what it was that you installed when you made the first installation of the Frick unit and the Niagara blower?

A. That is the first trip?

76Q. The first trip.

A. All right, sir. I put in—I guess that is “F”, I put in that stop and waste valve the first thing.

77Q. The stop and waste valve is “1”?

A. “1”, yes. Then I raised up there with this short nipple, and this elbow was down where the tee was.

78Q. This elbow being—I think that is “2”, Mr. Hayes. You are referring to the elbow that is just above the stop and waste valve “1”?

A. Which is above the tee. That is down where the tee is now. Then I came from the elbow across and connected the water valve.

79Q. By pipe “2”?

A. By pipe “2”, that is right.

80Q. And what was the purpose of this water line?

A. That water line was to supply the automatic water [564] valve to the compressor and the condenser of the Frick machine.

81Q. To supply water to the valve?

A. That is right.

82Q. When you returned to make the installation of the defrosting device what changes did you make in the piping?

A. I removed the elbow that was directly above the stop and waste, I replaced that with a tee. That tee supplied my water to my automatic water valve. That is the

(Deposition of Herbert E. Hayes)

side opening of that tee. I came out of the top that valve and used the elbow I originally had in place of the tee, which gave me an opening for my spray header, and in that line I placed I believe it was a half inch gate valve. This was the valve.

83Q. Is that valve "8"?

A. That is right. From that point I run over into the cold storage room.

84Q. With line "A"? A. Line "A" is right.

85Q. What connections then did you make in the cold storage room,—referring to Plaintiff's Exhibit 19?

A. I carried this line "A" through and up to the spray headers, which is "A-1", "A-2", and "A-3."

86Q. Did you install the spray headers as well?

A. I did.

87Q. Now on what blower unit was this done, the Niagara unit or the McQuay unit? [565]

A. The McCray unit.

88Q. Will you state whether or not the blower shown in Plaintiff's Exhibit 19 and the arrangement of the piping marked "A", "A-1", "A-2", "A-3", and "B" were installed by you in 1934 as shown in Plaintiff's Exhibit 19?

Mr. Lyon: That is objected to as leading, grossly so.

A. Yes, it is.

89Q. They were so installed by you in 1934?

Mr. Lyon: The same objection.

A. Yes.

90Q. Referring to Plaintiff's Exhibit 21 will you state whether or not the arrangement of the compressor-condensed unit, piping and valves, as shown in Plaintiff's Exhibit 21, were installed by you in 1934?

(Deposition of Herbert E. Hayes)

Mr. Lyon: That is objected to as leading.

A. Yes.

91Q. After the completion of the installation of the spray unit that you have testified about, did you ever operate this defrosting unit?

A. I did.

92Q. Will you describe, by referring to Plaintiff's Exhibit 21, just what you did in order to operate this unit, referring to the numbered and lettered legends on Plaintiff's Exhibit 21? A. To defrost? [566]

93Q. To defrost.

A. Yes, I would stop the blower by throwing out the switch, stop the compressor by throwing out the switch, and shutting off—there is no number on that, I guess that is "3",—shutting off valve "3" and opening valve "8".

94Q. What did that do?

A. That puts a small spray of water over the three rows of coils in the blower.

95Q. What did that spray do?

A. That took the ice off the coils.

96Q. How long did it take to defrost the coils?

A. Oh. I would say two to three minutes. Of course it all depends on the ice that was on the coils, but in ordinary defrosting it took from two to three minutes.

97Q. What did you do after the frost had been taken off of the coils?

A. Why, I would wait a minute and let all the water get down into the pan, and then I would come out and I would shut off valve number "1".

98Q. That is the stop and waste valve?

A. The stop and waste line, which would drain all the water ahead of that valve.

(Deposition of Herbert E. Hayes)

99Q. What was the object in doing that?

A. To drain the water that might be left in the pipe lines from the McCray unit back to the water supply. [567]

100Q. After this water had been drained out what did you do? A. Then I would turn off valve "8".

101Q. What did this do?

A. That valve "8" was my water supply to my spray header. I would open valve "3" which is the water supply to my automatic water valve on the compressor. I would open valve "1", throw in my switches on my blower and compressor.

102Q. After completing the installation did you make any tests of the temperatures inside the refrigerating space? A. After I put the defroster on?

103Q. Yes. A. I did.

104Q. What did you find?

A. I found out I was able to hold a temperature in the neighborhood of 28 degrees in there.

105Q. Do you recall who was operating the plant at the time that you put in this water defrosting installation?

A. I can only guess at it. I think his name was Martin.

106Q. Did you give any instructions to anybody as to the manner of operating the unit when you had completed the installation? A. I did.

107Q. Who did you give those instructions to?

A. This Mr. Martin. [568]

108Q. After making this installation and giving these instructions did you ever return to the installation in order to inspect it? A. I did.

(Deposition of Herbert E. Hayes)

109Q. What did you find?

A. Well, I don't know that I found anything, other than rechecking the job.

110Q. Were there any complaints as to its operation?

A. No, not at that time.

111Q. Were there any complaints that the ice stored in the building was melting?

A. To the best of my knowledge, no, I had no complaints of that, because the 28 degrees kept it from melting.

112Q. Were there any complaints that water in the header or the line "A" bringing water up to the header had frozen within the refrigerated room?

A. Not to my knowledge.

113Q. Will you describe to me the construction of the stop and waste valve "1", which you installed?

A. Well, it is a standard stop and waste valve, wheel handle, which, when closed, drains all the water ahead of this valve.

114Q. I show you Defendant's Exhibit "A" and ask you whether it is a correct drawing of the internal mechanism of the stop and waste valve which you installed in the 10th and [569] Tacoma service station, and if it is not, how you would alter that drawing to make it a correct one?

A. Well, I believe that particular valve is a double-seated valve; it has a seat here and also at the top, so as to block this off when the vent is off.

115Q. Can you indicate with ink on the drawing where such a seat would be?

A. Yes, but it would only be guesswork. I don't know the construction of that valve. There are lots of different types of valves, lever handle and wheel handle.

(Deposition of Herbert E. Hayes)

116Q. You never looked inside the waste valve that was installed?

A. No, but a valve of this sort is generally double seated, so when open it is seated and when closed it is seated.

117Q. Can you tell me whether the valve I am now showing you is of the same type of valve which you installed in the 10th and Tacoma Street service station?

A. Yes, I would say it was, the type, but not the make.

118Q. Can you describe to me the general operation of that valve? First of all, when the handle of the valve is turned to the open position how does the water pass through the valve?

A. This happens to be a globe valve, and that passes straight through the valve in that position to the spray head, [570] to the compressor, or anything on the other side of that valve.

119Q. When the valve is closed what is the operation of the valve?

A. It drains everything ahead of the valve through this small port.

120Q. The small port being the spigot?

A. That is right.

Mr. Neave: I offer this valve in evidence as Plaintiff's Exhibit 22.

Mr. Lyon: The offer is objected to on the ground the valve is not shown to have any connection with the valve in question. In fact, it is stated to be a different valve, of different type and different construction, and therefore incompetent, irrelevant, and immaterial.



(Deposition of Herbert E. Hayes)

(Plaintiff's Exhibit 22, so offered in evidence, is attached to these depositions.)

121Q. In view of Mr. Lyon's statement, I will ask you again whether this valve, Plaintiff's Exhibit 22, is of the same type as that which you installed in the 10th and Tacoma plant?

A. The same type, but I don't believe it is the same make.

122Q. It is the same type?

A. The same type, yes, which we call wheel handle stop and waste.

123Q. Its method of operation is the same? [571]

Mr. Lyon: Objected to as leading.

A. Yes, the same.

Mr. Lyon: I move to strike out the answer on that ground.

124Q. Mr. Hayes, at my request did you visit this plant at 10th and Tacoma Streets this morning?

A. I did.

125Q. How often have you been back to the installation since you left Hayes Brothers employ?

A. This is the first time.

126Q. Did you find that the plant was in operation?

A. It was not in operation.

127Q. What did you find with respect to the arrangement of piping as shown in Plaintiff's Exhibit 21?

A. I found line "B" being disconnected. I found—well, I am not sure, but I believe this union was disconnected and that union was disconnected.

128Q. The union in line "2"? A. Yes.

129Q. And the union in line—

A. (Interposing) "8".



(Deposition of Herbert E. Hayes)

130Q. I think that is line "A". A. "A".

Mr. Lyon: Just mark those unions, will you, please?

The Witness: I am not sure about this.

Mr. Lyon: Just mark them. [572]

131Q. Mark the union in line "2" with a line to it as "2U"; and the union in line "A" as "AU".

A. (Witness does as requested.) I am sure I found this line here disconnected.

132Q. Mark that line you are pointing to.

A. That is a flared connection right there.

133Q. Mark that as "G".

A. (Witness does as requested.)

134Q. What is the connection "G" that you have marked? Is it a water line?

A. "G" is the water line from the condenser to the compressor head.

135Q. Did you go into the refrigerating room this morning on your visit? A. I did.

136Q. Turning to Plaintiff's Exhibit 19, did you find any change in the arrangement of the parts from that shown in Plaintiff's Exhibit 19 on your visit this morning?

A. I did not.

137Q. Did you observe whether or not the ice, if there was any ice in the refrigerator room, was melting?

A. No, it was not melting, although they had very little in there. It was on the automatic machine. There was none in storage there.

Mr. Neave: That is all. [573]

(Whereupon, at 12:30 o'clock p. m. the further taking of these depositions was recessed until 1:15 o'clock p. m.)

Indianapolis, Indiana, February 13, 1945, 1:15 o'clock  
p. m.

The parties met pursuant to adjournment, and the taking of depositions was resumed.

HERBERT E. HAYES,

resumed the stand, and testified further as follows:

Cross Examination

By Mr. Lewis Lyon:

138Q. What did you say you were doing at the present time, Mr. Hayes?

A. I am with the Johnson Service Company.

139Q. Who is the Johnson Service Company?

A. They install heating and air conditioning controls.

140Q. Where are they located?

A. 333 North Pennsylvania Street.

141Q. In this city? A. That is right.

142Q. What experience have you had in the refrigeration business, or had had prior to your connection with the Hayes Company?

A. I learned the business through Hayes Brothers.

143Q. How long were you with the Hayes Brothers? [574] A. From 1912.

144Q. How much experience had you had prior to this Polar Ice & Fuel Company job with the handling of ice?

A. Oh, possibly two or three years.

145Q. Is it not a fact, Mr. Hayes, that if you kept a cake of ice in a room at 28 degrees Fahrenheit, using an air circulation system over a fin coil structure that you will reduce the size and weight of that cake of ice?

A. I don't know.

(Deposition of Herbert E. Hayes)

146Q. You have no knowledge of that?

A. No. I am no engineer, I am just a steamfitter by trade.

147Q. Do you know where the frost comes from on a unit such as this fin unit that you say you installed for the Polar Ice & Fuel Company in a closed room of the character which you state you made that installation in?

A. Yes, I believe it came from the moisture from the outside and the inside.

148Q. Where does the moisture come from on the inside?      A. They were using a hose to defrost.

149Q. If you are not using a hose to defrost?

A. They don't have any unless you open the door all the time.

150Q. There was no frost collected then?

A. Yes, after they would open that door maybe a dozen [575] times in the morning.

151Q. That is your idea of the only source of the frost that collects upon the fins of such a blower coil unit?

A. Not necessarily. They would bring that ice there in large trucks, possibly three or four truck loads at a time, and throw it in that storage room, and that door would be open quite awhile.

152Q. You say you are now in the air conditioning business?      A. That is right.

153Q. Do you know of any uses of air conditioning in conjunction with refrigeration when the refrigeration is used for the purpose of dehydrating?

A. No, I don't think I do.

154Q. You know of no uses of refrigeration for dehydrating?      A. Put that another way, can you?

(Deposition of Herbert E. Hayes)

155Q. You know of no place of refrigeration being employed for the purpose of actually taking the water out of the substance subjected to refrigeration?

A. No, I don't.

156Q. You don't? A. No, sir.

157Q. Do you know what is kept in this storage house at 10th and Tacoma, besides ice?

A. At that time? [576]

158Q. What was kept there when you were down there the other day?

A. There was kindling in there and there was a little ice.

159Q. And that is all?

A. That is all I noticed.

160Q. When were you there?

A. Within the last two or three hours.

161Q. Today? A. Yes.

162Q. And you did not notice milk, Coca-Cola and other beverages in the place?

A. No, sir, I didn't.

163Q. You did not? A. No, sir.

164Q. You did not see any milk there at all?

A. No, I didn't.

165Q. You did not look, did you? A. No, sir.

166Q. I was just down there, too, and it is full of milk and Coca-Cola and beverages. A. Full?

167Q. I wouldn't say full. Let me say there was about four cases of soft drinks, three or four cases of milk. A. How near to the unit? [577]

168Q. In the same room with it.

A. I went directly over to the unit.

(Deposition of Herbert E. Hayes)

169Q. And never saw anything else?

A. No, sir, I didn't.

170Q. Right underneath the unit there are cases of soft drinks.

Mr. Neave: I object to counsel testifying in this case.

171Q. You did not see that?

A. No, sir. In fact, I wasn't looking for that.

172Q. Do you know what the temperature of the room is now? A. No.

173Q. Or when you were there this morning?

A. No, sir.

174Q. Do you know whether it was above or below freezing? A. I would say it was above freezing.

175Q. Did you inspect the ice that was in there?

A. No, sir.

176Q. Do you know whether it was dry or not?

A. No, sir.

177Q. As a matter of fact, you do know it is not necessary for it to be below freezing for the ice to be dry enough to pass through the dispensing machine?

A. No, sir, I don't know that.

178Q. You did not know that? [578]

A. No, sir.

179Q. You believe it has to be below freezing?

A. To hold it?

180Q. In order for the ice to pass satisfactorily through the ice dispensing machine.

A. That I wouldn't know.

181Q. You don't know? A. No, sir.

182Q. Are you familiar with wood which is rotted because of moisture? A. No, sir.

183Q. You are not? A. I am no engineer.

(Deposition of Herbert E. Hayes)

184Q. You have not had any experience then on the inside of refrigeration plants to determine where wet rot occurs?

A. No, sir. I was concerned only in the mechanical end.

185Q. Were you in any way interested in or a part of or a part owner of the Hayes Company that you say you worked for?

A. My father happened to be one of the brothers.

186Q. Is that company still in existence?

A. It is.

187Q. You stated you made some temperature determinations in this room after you put this spray outfit in. Did you make any written report of those temperatures?

A. No, sir. [579]

188Q. Was there ever a written report made you know of? A. Not that I know of.

189Q. How many times did you state that you inspected this installation after you say you converted it to a spray outfit? A. I don't know.

190Q. Was it once or more?

A. It was more than once.

191Q. Did you ever see it when the spray pipes were frozen? A. No, I didn't.

192Q. You don't know that the spray pipes ever froze?

A. I never received that complaint, and I had been there after that was up.

193Q. As far as you know, the spray pipes never froze up? A. That is right.

194Q. And had to be defrosted by shutting off the unit and allowing the coil to come up to room temperature?

A. No, sir, I don't know that.

(Deposition of Herbert E. Hayes)

195Q. If that occurred, you have no knowledge of it?

A. That is right.

196Q. That is the only way by which the lines could be opened in that particular installation if they froze up once, isn't it? I mean by that, by turning off the unit and allowing the whole coil system to come up to room temperature, and assuming the room temperature is higher than freezing, and in that way getting rid of the ice in the water spray lines? [580]

A. Well, they would have to leave the water valve on to get water up there.

197Q. But if the line was frozen the water would not go through, would it? A. That is right.

198Q. Mr. Hayes, in referring to Plaintiff's Exhibit 19 for identification, do you know when that picture was taken? A. No, sir.

199Q. Are you able to say that that picture accurately represents the structure as it is there shown as when you state you made the installation?

A. No, I can't answer that. I think that is a cooler right there. That was not there when I made the installation.

200Q. Is there anything else on that picture which is not an accurate illustration of the room or the ceiling type coil unit or the piping system as it was when you installed it?

A. As far as the mechanical advantages, the water supply and this waste is the way I left it.

201Q. When you inspected it three or four hours ago it was still in the same mechanical condition as when you made the installation, is that correct?

A. Other than being disconnected.



(Deposition of Herbert E. Hayes)

202Q. Other than being disconnected, but the pipes that were connected were in the same position as when you made the installation? [581]

A. Yes, I would say that they were. I didn't go there on an inspection, I was there only ten or fifteen minutes.

203Q. Is that stated for the purpose of qualifying your last answer?

A. Well, no, not necessarily. I will say that this line and this line, when I was there a little bit ago, were the same.

Mr. Neave: Are those lines "A" and "B"?

The Witness: "A" and "B", yes, sir.

204Q. Is it not a fact, Mr. Hayes, that those lines are both inclined in such a way that the point, for example, of the line "B" where it enters or goes through the wall of the storage room is at a higher elevation at a point which I will mark "L" than it is in elevation at the point that I will mark "M" on Plaintiff's Exhibit 19 for identification.

A. Do you mean from this point to this point inside the wall?

205Q. That is right. That the pipe "B", as the other pipes of that system, incline downwardly from the point "L" to the point "M", as it is illustrated in Plaintiff's Exhibit 19?

A. Well, I noticed this morning that the seal is turned upside down.

206Q. Just answer that question, please. I am not asking how about something else.

A. From this point to this wall here you want to know [582] if this is higher than here?

(Deposition of Herbert E. Hayes)

207Q. If "L" is not higher than "M".

A. I can't answer that.

208Q. You have no idea?                      A. No, sir.

209Q. Then you have no idea what the condition was when you made the installation. That is also true, is it not?

A. I know that water would drain by gravity.

210Q. Just answer the question.

A. No, I don't know that.

Mr. Neave: Now, you can go on and continue the answer that you started.

The Witness: I know that that water drains by gravity from the pan to the floor.

211Q. Did you ever take the pipe "B" off between the points "L" and "M" to determine whether the water was out of it or not?                      A. No, sir.

212Q. In any of these inspections that you made?

A. No, sir.

213Q. Is it not true, or do you have any knowledge of the direction in which the pipes which you say you have marked "A-1", "A-2", and "A-3", in Plaintiff's Exhibit 19, extend into the coil unit?

A. It extends into the housing of the unit. [583]

214Q. Are they horizontal or inclined?

A. I don't know.

215Q. You have no idea?                      A. No, sir.

216Q. You have no idea what they were when the installation was made?                      A. No, sir.

217Q. You do not know whether they were placed in a definite horizontal position or were inclined, is that correct?                      A. They should have been inclined.

(Deposition of Herbert E. Hayes)

218Q. How could they be inclined?

A. I don't know.

219Q. You never looked at them? A. No, sir.

220Q. Is it not also true that the part which I will mark "O" is higher than the point that I will mark "P" in the water inlet pipe in Plaintiff's Exhibit 19?

A. What was the question again, please?

221Q. I say is it not a fact that on the water inlet line that the point "O" as I have marked it on Plaintiff's Exhibit 19 for identification is higher than the point on the same line that I have marked "P"?

A. I don't know; I never had occasion to measure that.

222Q. You do not know? A. No, sir. [584]

223Q. And you do not know what its condition was when you installed it? You never measured it at any time, did you? A. No, I believe not.

224Q. Is it not also true, or do you know, whether or not the point which I will mark "R" on Plaintiff's Exhibit 19 is higher than the point that I will mark "S" on Exhibit 19? A. No, sir, I don't know.

225Q. You never measured it? A. No, sir.

226Q. You do not know what it was when it was installed? A. No, sir.

227Q. Is it not a fact, Mr. Hayes, that you installed this so-called stop and drain valve on this unit in this construction for the purpose of draining the water from the condenser of the Frick refrigeration unit in this installation? A. For the original setup, yes, sir.

228Q. And that was the purpose of its installation, was it not? A. At that time, yes.

229Q. And it is the purpose that it performed after that time, is it not? A. That is right.

(Deposition of Herbert E. Hayes)

230Q. When you were out there this morning and inspected this unit did you have a sample of these photographs, Plaintiff's Exhibit 18, 19, 20, and 21, with you? [585]

A. No, and I don't care for the word "inspection," because I didn't inspect the job; I looked at the job.

231Q. When you were out there and looked at it did you have copies of these photographs with you?

A. I did not.

232Q. Was anyone with you who did have copies of them? A. This morning?

233Q. Yes. A. Absolutely not.

234Q. Who was with you this morning?

A. No one.

235Q. Is this the only time you have seen this installation since 1940?

A. Since 1934, to the best of my knowledge.

236Q. Since 1934? A. That is right.

237Q. You have not seen the unit from 1934 until today? A. Until this morning, that is right.

238Q. When did you first see the plaintiff's exhibits, the photographs, 18, 19, 20, and 21?

A. I would say within the last 90 days.

239Q. Who showed them to you?

A. Mr. Goldsmith.

240Q. He is a patent attorney here in town?

A. I don't know who he is. [586]

241Q. You don't know who he is? A. No.

242Q. Who introduced you to him?

A. He introduced himself.

243Q. No one with him? A. No.

(Deposition of Herbert E. Hayes)

244Q. When you looked, as you say, in this storage room today, you say there was ice there. Was the ice melting? A. I didn't examine it.

245Q. You did not see whether the ice had water on it or not? A. That is right.

246Q. You state that you installed this ceiling type McQuay coil unit for the Tacoma Ice & Fuel Company, is that correct?

A. No, I installed it for Hayes Brothers.

247Q. How long was it between the time you made that installation and the time you came back and state that you installed this water spray type system?

A. I don't know.

248Q. You have no idea? A. No, sir.

249Q. Was the unit in operation between those periods of time? A. The McCray? [587]

250Q. Yes.

A. Yes, it was in operation between the time, until I went back to put the spray in.

251Q. You have no idea how long it was in operation before the spray unit was installed?

A. No, I don't.

252Q. You can give no estimate of time?

A. Well, I would say within 90 days. I may be off one way or another, but we went back on the strength of the complaints.

253Q. And for that period of approximately 90 days it was operating, is that correct?

A. It might have been only 30 days. Let us make it 30 days. I don't know.

254Q. You have no idea?

A. No, sir, I don't have.

(Deposition of Herbert E. Hayes)

255Q. Do you have any knowledge of what happened to the Niagara blower unit that was taken out and the McQuay unit replacing it? A. No, sir, I do not.

256Q. Was the Niagara unit a smaller or a larger unit? A. I can't answer that.

257Q. You have no idea what the relative capacities of the two units were? A. No, sir. [588]

258Q. Was the Niagara unit also a blower type fin coil unit? A. It was.

259Q. Purchased from the Niagara Blower Company, do you know? A. I don't know.

260Q. Was this unit a McCray or a McQuay unit?

A. I don't know. The name is on it is the only thing I can go by.

261Q. You don't know whether it was M-c-C-r-a-y or M-c-Q-u-a-y, which unit it was ?

A. I do not.

262Q. The only way you know it is either way is by the name that appears in the photograph, isn't that correct? A. That is right.

263Q. Is it not a fact, Mr. Hayes, that the reason for the use of this stop and drain valve which you have referred to is that without such a stop and drain valve being in position in this installation that these water pipes, being subject to the outside temperature outside of the storage room would freeze up in wintertime if it were not for the use of such a drain valve?

A. Unless you dismantle all the pipe work.

Mr. Lyon: That is all. [589]



(Deposition of Herbert E. Hayes)

Redirect Examination

By Mr. Neave:

264Q. Who was Mr. Joseph Hayes?

A. My uncle.

265Q. What is his position with Hayes Brothers?

A. President.

266Q. When you made the installation of the water sprays and put in the piping "A" shown in Exhibit 21, why did you not put in a second stop and waste valve in Line "A"?

A. Well, it would just have been poor practice.

267Q. Was there any necessity of putting in a second stop and waste valve?

A. Absolutely not.

268Q. Why not?

A. Well, you have already had one in the line.

269Q. What function did the one already in the line perform with respect to line "A"?

A. Why, it would drain line "A" if you wanted to drain the water beyond the valve.

270Q. You stated in your cross examination that you did not know how long it was between the installation of the McQuay unit and the installation of the water spray?

A. That is right.

271Q. Would the installation of the water spray have been made in the same year that the installation of the McQuay [590] unit was made?

Mr. Lyon: Objected to as leading, grossly so. The witness stated on cross examination he could not even estimate the time.

A. Yes, sir, it was.



(Deposition of Herbert E. Hayes)

272Q. Have you any knowledge as to whether the water spray was installed and tested before the Polar Ice & Fuel Company paid for the job?

Mr. Lyon: That is objected to as not redirect examination, and objected to on the ground the witness has not been qualified to answer the question.

273Q. The question is whether you have any knowledge of that. A. No, I have no knowledge of that.

274Q. What was your normal practice in the installation of piping when you put in a stop and waste valve in a line with respect to the layout of the pipes and the line?

Mr. Lyon: Objected to as assuming a fact of which there is no evidence.

A. It was just plumbing practice was all.

275Q. Plumbing practice for what?

A. For draining all the water beyond the valve in case of the closing up of a shut down.

276Q. That is, the stop and waste valve was so put in the line that it would drain all the water ahead of it in the line? [591]

Mr. Lyon: Objected to as leading, grossly.

A. That is right.

277Q. Will you state whether or not that was the manner in which you made the installation of the line "A" in the Tacoma and 10th Street Polar Ice plant?

Mr. Lyon: That is objected to as assuming a fact which the witness is not qualified to answer. He has stated he don't know the inclination of the pipes and never did.

A. I still don't understand the question.

(Deposition of Herbert E. Hayes)

278Q. I will rephrase the question. You stated that it was the plumbing practice which you followed when you had a line in which there was a stop and waste valve to so arrange the stop and waste valve and the line that it would drain the water back of the stop and waste valve.

A. Ahead of the valve.

279Q. What I am asking you now is whether you applied that standard plumbing practice to your installation in the Tacoma and 10th Street plant?

Mr. Lyon: I object to that question on the ground the witness is shown not to be qualified to answer the question. He has no idea of what the inclination of any of the pipes was either now or when he made the installation. Having so answered, he is obviously incompetent to answer this question.

A. I would say yes. [592]

### Recross Examination

By Mr. Lewis Lyon:

280Q. Mr. Hayes, do you know or did you observe at the time you installed this ceiling type unit, which you say was the McCray or the McQuay unit, for Hayes Brothers at this 10th and Tacoma Street address, if there was a name plate and serial number plate on that unit?

A. No, sir, I don't know.

281Q. You have no knowledge of the removal of such a plate? A. That is right.

Mr. Lyon: That is all.

Mr. Neave: The next witness is Henry L. Dithmer, Jr., and I would like to have the direct examination copied into the record. Mr. Dithmer was the secretary and

treasurer of the Polar Ice & Fuel Company since 1925, the concern that bought this installation, and he was the one that produced Exhibit 13, which was the letter of proposal by Barton; 14, the Polar purchase order; 15, the Hayes invoice; 16, which was the second Hayes invoice; 17, the carbon copy of the May 2nd letter; and 23, the carbon of the check, which was in payment for the installation.

Mr. Lewis Lyon: I would like to offer the cross examination, too, your Honor, and ask that it be copied into the record. [593]

The Court: Very well.

HENRY L. DITHMER, JR.,

being first duly sworn to testify the truth, the whole truth, and nothing but the truth relating to said cause, deposes and says:

Direct Examination

By Mr. Neave:

1Q. What is your full name?

A. Henry L. Dithmer, Jr.

2Q. What is your residence?

A. 5254 North Delaware Street, Indianapolis.

3Q. What is your occupation?

A. Secretary-Treasurer, Polar Ice & Fuel Company.

4Q. How long have you held that position?

A. Twenty-one years.

5Q. Are you in charge of the records of the company as Secretary?      A. I am.

6Q. I show you Plaintiff's Exhibit 13 and ask you whether you have in the records of your company the original of this letter, and if you have, will you please produce it?

(Deposition of Henry L. Dithmer, Jr.)

A. I have or had. Do you mean right now, produce it right now?

7Q. If you have it with you.

A. Yes. The stitches are all rusted in. There are some [594] others there that are not exhibits.

8Q. Will you tell me whether Plaintiff's Exhibit 13 is a photostatic copy of the original which you have produced of letter dated January 18, 1934 from Hayes Brothers to Polar Ice?

Mr. Lyon: Having made an inspection, I will stipulate that it is.

Mr. Neave: I noticed in Plaintiff's Exhibit 13, the photostat, the corner it has not been fully photostated. Do you want another photostat made?

Mr. Lyon: No.

9Q. I show you Plaintiff's Exhibit 14—

Mr. Lyon: (Interposing) Let me inspect those, and maybe I can make the same stipulation as I did on the other.

I will stipulate that Plaintiff's Exhibits 14, 15, and 16, are true photostatic copies of the originals.

10Q. Mr. Dithmer, these Exhibits 14, 15, 16, and 13, are all documents kept in your files in the ordinary course of business? A. Yes, sir.

11Q. I show you Plaintiff's Exhibit 17 and ask whether you have the original of that exhibit from your files?

A. We have the carbon copy, the original carbon copy made of that letter, not the original letter. That was mailed to Hayes Brothers. [595]

12Q. This that you are producing is the original carbon copy? A. Yes.

(Deposition of Henry L. Dithmer, Jr.)

Mr. Lyon: This obviously is a photostat of what the witness says is a copy.

Mr. Neave: I offer in evidence Plaintiff's Exhibits 13, 14, 15, 16, and 17.

(Plaintiff's Exhibits 13, 14, 15, 16, and 17, so offered in evidence, are attached to these depositions.)

13Q. Now, Mr. Dithmer, can you tell me whether or not Polar Ice ever paid the bills shown on the Hayes' invoices, Plaintiff's Exhibits 15 and 16?

A. I can. They did.

14Q. Can you tell me the date of the check by which payment was made?

A. It was paid by our check 993, on a check dated July 11, 1934.

15Q. Have you a copy of that check?

A. We have a carbon copy we used for a check record.

16Q. You were unable to find the copy of the check itself?

A. That is right.

17Q. Will you produce the carbon copy, please?

Mr. Lyon: I will stipulate that is a photostat of this piece of paper that the witness produced.

18Q. What is the amount of the check that was made out [596] dated July 11, 1934 as seen from the carbon copy of the check which you have produced?

Mr. Lyon: The record speaks for itself and is the best evidence.

Mr. Neave: On account of the photostat not being very good, I wanted the witness's answer.

A. \$474.65.

Mr. Neave: I offer in evidence the photostatic copy of the carbon copy of the check No. 993 produced by the witness, as Plaintiff's Exhibit 23.

(Deposition of Henry L. Dithmer, Jr.)

(Plaintiff's Exhibit 23, so offered in evidence is attached to these depositions.)

19Q. Mr. Dithmer, does your company own a building on the corner of Tacoma and 10th Street?

A. They do.

20Q. Do you lease that building?

A. Do we lease it to an operator?

21Q. Yes. A. Yes.

22Q. Can you tell me to whom you have leased that building since 1934? A. Yes.

23Q. Will you please do so?

A. When we first opened that ice station it was leased to Charles Martin. That was in January of 1934. And he [597] operated it continuously until some time in October, I think about the 23rd of October.

Mr. Lyon: You mean he leased it until that time?

The Witness: He leased it and operated the station, yes.

24Q. Of the same year?

A. Of the same year. After that one of our employees by the name of Harold Schulmeyer operated it for a few days, I think four or five days. Then a man named Hiatt, now deceased, operated it from about October 27, 1934 until September 11, 1935. Then various company employees, whose names I do not know, operated it from September 11, 1935 to March 3, 1936. Then Roscoe and Earl Simons—Earl is Roscoe's son—operated it from March 3, 1936 until Mr. Simons, the older Simons, was killed in a hold-up, and Earl Simons has operated it continuously since then.

Mr. Neave: You may cross-examine.



(Deposition of Henry L. Dithmer, Jr.)

Cross Examination

By Mr. Lewis Lyon:

25Q. In your statement, by "operating" you mean—

A. (Interposing) That they leased it.

26Q. Leased it and sold ice out of it?

A. That is correct.

27Q. That is the limitation of what you mean?

A. Yes. [598]

Mr. Neave: The next witness is Oscar W. Nester, and I will offer his direct testimony. Mr. Nester was the purchasing agent of the Polar Ice Company since 1927, and he was the purchasing agent at the time this purchase was made. He identified Exhibit 14, which is the purchase order, and Exhibits 15 and 16 and some of his writing on them, and he testified that the job was paid for because the engineer of the company said it was satisfactory.

The Court: Do you want the cross examination in?

Mr. Lewis Lyon: Yes, your Honor.

OSCAR W. NESTER,

being first duly sworn to testify the truth, the whole truth, and nothing but the truth, relating to said cause, deposes and says:

Direct Examination

By Mr. Neave:

1Q. What is your full name, Mr. Nester?

A. Oscar W. Nester.

2Q. What is your residence address?

A. 5130 North Pennsylvania Street, Indianapolis.

3Q. By whom are you employed?

A. Polar Ice & Fuel Company.



(Deposition of Oscar W. Nester)

4Q. How long have you been with the Polar Ice & Fuel Company? A. July 25, 1923.

5Q. What is your position with them? [599]

A. Purchasing agent.

6Q. How long have you been purchasing agent?

A. Through the entire period.

7Q. Do you recall ever having made a purchase for your company from the Hayes Brothers, Incorporated, of Indianapolis, of a refrigeration installation, Mr. Nester?

A. Yes.

8Q. I show you Plaintiff's Exhibit 14, and ask you whether you can identify it?

A. Yes, that is my signature, and the order I wrote covering the installation.

9Q. I show you Plaintiff's Exhibits 15 and 16, and ask you whether you know anything concerning the words, "Hold" that appear on those two invoices?

A. Yes, that is my handwriting.

10Q. Why were they put on those invoices?

A. The installation was not satisfactory to pass payment of the invoice, so in order that it would not be paid I marked the word "Hold" there.

11Q. Were the invoices eventually paid?

A. They were paid.

12Q. Was the job satisfactory when they were paid?

Mr. Lyon: That is objected to as calling for a conclusion of the witness, and on the further ground he is not qualified to answer the question. [600]

A. I can answer it that it was satisfactory, because I asked the chief engineer if it was satisfactory and if the invoices could be passed for payment, and he said "Yes."

(Deposition of Oscar W. Nester)

Mr. Lyon: I move to strike the statement of the witness as hearsay.

13Q. Did you ever see the installation after it was made in the 10th and Tacoma Street plant?

A. Yes.

14Q. Did you ever see it operate?

A. Yes, I saw it operate.

15Q. Was that while Charles Martin was still the lessee? A. Yes.

16Q. Did he have any complaints as to its operation?

A. Yes.

17Q. What were his complaints?

A. That the machine would not defrost quickly enough. Naturally it is a cold room anyway, there is ice in there and the fins and coils would not defrost quickly enough, it took too long for them to defrost.

18Q. Was any change made in the installation after the complaint? A. After the complaint?

19Q. Yes. A. Yes, there was change made.

20Q. What change was made? [601]

A. I am not an engineer, understand. I can just tell you what is there.

21Q. I just want to know what you know.

A. At the time this was handled by Mr. Lamar, chief engineer, and I was not familiar with what changes were to be made, or were made, until after it was made, and when I saw piping installed above the unit like a sprinkler system to allow drippage of water to defrost the coils.

22Q. After that installation was made did you get any further complaints from Martin about its operation?

A. No, I think we were all satisfied the unit was giving the temperatures it was supposed to and was doing as good a job as could be expected.

(Deposition of Oscar W. Nester)

23Q. Was the bill thereafter paid?

A. The bill was then paid.

24Q. Is Mr. Lamar still alive?

A. No, he died in October.

25Q. Of 1944? A. 1944.

Mr. Neave: You may cross-examine, Mr. Lyon.

Cross Examination

By Mr. Lewis Lyon:

26Q. You know nothing of the series of changes which were made in this structure, do you?

A. I am not mechanically competent to tell you anything [602] except what I saw, and it was not my job to determine that. I bought it, and I asked the engineer if it was satisfactory, so I could get rid of the bill. That was it.

27Q. All you know then is that someone told you it was O.K. Is that correct?

A. Mr. Lamar told me, the chief engineer.

28Q. And you paid the bill? A. Yes.

29Q. That is really the sum and substance of what you know, is it not?

A. I bought it, and I got complaints on it, and I held up the bill, and I always ask the individual responsible for a purchase of this amount if it is satisfactory to be paid. He told me to hold it up, it wasn't doing right. Then after the change was made I asked him—I kept asking him, and he told me that it was satisfactory to pay it.

30Q. He told you it was satisfactory to pay the bill?

A. To pay the bill, yes.

Mr. Neave: The next witness is Elmer LeGrand Goldsmith, and I offer his direct testimony. Now, Mr. Goldsmith is a patent lawyer in Indianapolis, and his client was Mr. Hayes, Sr., of the Hayes Company. I would like to read, starting on page 115, if my assistant will co-operate.

"6Q. Have you a partner in any other city? [603]

"A. Yes.

"7Q. Who is that? "A. Dwight B. Galt.

"8Q. In what city?

"A. Washington, D. C. That is where his office is. He lives in Hyattsville, Maryland.

"9Q. Have you an office of the partnership in Washington? "A. We do.

"10Q. Are you acquainted with Joseph Hayes or Hayes Brothers? "A. Very well.

"11Q. How long have you known Mr. Hayes?

"A. I would say since about 1923 or 1924 when I became a member of the Sciencetech Club. He was then an active member of it, and still is, I believe, and so am I.

"12Q. Did Mr. Hayes ever consult you professionally in regard to a refrigerating or water defrosting unit?

"A. He did.

"13Q. When was that?

"A. I would say it was after lunch in the afternoon. I cannot give the day without referring to my diary. I have a memorandum of that date in September, 1934.

"14Q. Will you produce your diary and refer to it and refresh your recollection. [604]

"A. It was Wednesday, September 5, 1934.

"15Q. What are you referring to?

"A. I am referring to my 1934 daily diary.

"16Q. Is this a photostatic copy of your September 5, 1934 daily diary you have just referred to?

"A. That is correct.

"17Q. What did the entry in your diary mean?

"A. It means that Joe Hayes disclosed to me an invention and that he asked that a preliminary search be made, which search is made by Mr. Galt in Washington, that being a part of our partnership agreement.

"18Q. Did you write to Mr. Galt in regard to a search that was to be made for Mr. Hayes?

"A. I did.

"19Q. I show you a photostat of a letter dated September 5, 1934, to Dwight D. Galt, and ask you what that letter is, whether you recognize it?

"A. This is a 5-page letter, written by my then secretary Ann M. Kramer, and my numeral is shown as No. 4. It is signed, "ELG", those being my initials.

"20Q. Did you sign those initials?

"A. I did, sir. On page 3, the third line, the third last word, it is my correction. I cannot tell whether it was made in ink or pencil from this photostat. In the fifth line, the word "coil" was stricken [605] out by me. The two words, 'when cooling' was added by me either in pen or pencil. In the second line of the next paragraph the tense of the verb was changed from 'then are' to 'may be'. In the second last line I inserted, 'and eliminate frosting'. Again, on page 4, I cannot tell whether I am the one that underscored 'deluge type defroster',—I might add 'deluge' was Joe Hayes term for the arrangement—but the addition to the sentence, 'prevention of ice blocks freezing together' is in my handwriting. The insertion, 'that', in the following paragraph also is in my handwriting.

"21Q. The letter seems to refer to certatin drawings. Have you the drawings? "A. I do not.

"22Q. Have you your office copy of this original letter? "A. I do not.

"23Q. Is the original letter in your possession?

"A. It is not.

"24Q. How does it happen that you do not have the copy of this letter or the drawings?

"A. I might explain it this way; we are very cramped for storage space, and periodically we go through our files and strip them, and I believe that about three or four years ago we took out everything [606] from the files of the miscellaneous A to Z, such as relate to casual clients, and discarded them so we would have more space in our files. That leaves only in our files at the present time from 1935 on."

Now, I would like to refer your Honor to this Exhibit 25, which I would like to read.

The Court: I have read it.

Mr. Neave: You have read it already?

The Court: Yes, I have read it.

Mr. Neave: Very well, sir.

The Court: Although there is no drawing here.

Mr. Neave: That is right.

The Court: But I have read the letter.

Mr. Neave: Very well, sir.

The Court: It will be in the record?

Mr. Neave: Oh, certainly. That will be offered as an exhibit.

Mr. Goldsmith then identified certain other exhibits, such as the bill he rendered to Mr. Hayes, which is Exhibit 28, and the letter that he received back from Mr. Galt, Exhibit 26, and the letter that he wrote to Mr.



Hayes, Exhibit 27. I think that completes the direct examination.

Mr. Lewis Lyon: I will offer also the cross examination, your Honor, and particularly call your Honor's attention to the fact that Mr. Hayes has never made any reply of any [607] kind to Mr. Goldsmith's letter. He answered Question 41 on page 127, and nothing was ever done with this investigation. It was dropped there.

Mr. Neave: I will offer also the redirect examination and also, of course, the statements that may have been made during the cross examination. There was a statement that was made in regard to the exhibits by me, which should go in. There is a stipulation on pages 130 and 131, which should go into the record, and which pertains to Exhibits 25 and 26, to the effect that Mr. Galt, if called, would produce those records.

ELMER LeGRAND GOLDSMITH,

being first duly sworn to testify the truth, the whole truth, and nothing but the truth relating to said cause, deposes and says:

Direct Examination

By Mr. Neave:

1Q. What is your full name, Mr. Goldsmith?

A. Elmer LeGrand Goldsmith.

2Q. What is your residence address?

A. 129 East 51st Street, Indianapolis, Indiana.

3Q. What is your occupation?

A. Patent lawyer.

4Q. How long have you been an attorney in Indianapolis?

A. I was admitted to the bar here, but prior to that [608] time I was practicing patent law in the office of the then firm, Lockwood & Lockwood.



(Deposition of Elmer LeGrand Goldsmith)

5Q. Of this city?

A. Of this city. That was in September, 1919. I don't remember whether I was admitted to the Bar in 1921 or 1922.

6Q. Have you a partner in any other city?

A. Yes.

7Q. Who is that? A. Dwight B. Galt.

8Q. In what city?

A. Washington, D. C. That is where his office is. He lives in Hyattsville, Maryland.

9Q. Have you an office of the partnership in Washington? A. We do.

10Q. Are you acquainted with Joseph Hayes or Hayes Brothers? A. Very well.

11Q. How long have you known Mr. Hayes?

A. I would say since about 1923 or 1924 when I became a member of the Sciencetech Club. He was then an active member of it, and still is, I believe, and so am I.

12Q. Did Mr. Hayes ever consult you professionally in regard to a refrigerating or water defrosting unit?

A. He did.

13Q. When was that?

A. I would say it was after lunch in the afternoon. [609] I cannot give the day without referring to my diary. I have a memorandum of that date in September, 1934.

14Q. Will you produce your diary and refer to it and refresh your recollection.

A. It was Wednesday, September 5, 1934.

Mr. Lyon: May I see, please, what the witness is referring to.

15Q. What are you referring to?

(Deposition of Elmer LeGrand Goldsmith)

A. I am referring to my 1934 daily diary.

Mr. Lyon: Let me see it, please.

16Q. Is this a photostatic copy of your September 5, 1934 daily diary you have just referred to?

A. That is correct.

Mr. Neave: I offer it in evidence as Plaintiff's Exhibit 24.

(Plaintiff's Exhibit 24, so offered in evidence, is attached to these depositions.)

17Q. What did the entry in your diary mean?

A. It means that Joe Hayes disclosed to me an invention and that he asked that a preliminary search be made, which search is made by Mr. Galt in Washington, that being a part of our partnership agreement.

18Q. Did you write to Mr. Galt in regard to a search that was to be made for Mr. Hayes?

A. I did. [610]

19Q. I show you a photostat of a letter dated September 5, 1934, to Dwight D. Galt, and ask you what that letter is, whether you recognize it?

A. This is a 5-page letter, written by my then secretary Ann M. Kramer, and my numeral is shown as No. 4. It is signed "ELG", those being my initials.

20Q. Did you sign those initials?

A. I did, sir. On page 3, the third line, the third last word, it is my correction. I cannot tell whether it was made in ink or pencil from this photostat. In the fifth line, the word "coil" was stricken out by me. The two words, "when cooling" was added by me either in pen or pencil. In the second line of the next paragraph the tense of the verb was changed from "then are" to "may be". In the second last line I inserted, "and eliminates

(Deposition of Elmer LeGrand Goldsmith)

frosting". Again, on page 4, I cannot tell whether I am the one that underscored "deluge type defroster",—and I might add "deluge" was Joe Hayes term for the arrangement—but the addition to the sentence, "prevention of ice blocks freezing together" is in my handwriting. The insertion, "that", in the following paragraph also is in my handwriting.

21Q. The letter seems to refer to certain drawings. Have you the drawings? A. I do not.

22Q. Have you your office copy of this original letter? [611] A. I do not.

23Q. Is the original letter in your possession?

A. It is not.

24Q. How does it happen that you do not have the copy of this letter or the drawings?

A. I might explain it this way: we are very cramped for storage space, and periodically we go through our files and strip them, and I believe that about three or four years ago we took out everything from the files of the miscellaneous A to Z, such as relate to casual clients, and discarded them so we would have more space in our files. That leaves only in our files at the present time from 1935 on.

Mr. Neave: I ask that this letter of September 5, 1934 be marked as Plaintiff's Exhibit 25 for identification.

25Q. Did you receive any reply from Mr. Galt to your letter of September 20th?

A. My letter was not dated September 20th.

26Q. I beg your pardon,—your letter dated September 5th, Plaintiff's Exhibit 25.

A. Yes. It was Mr. Galt's custom to report back to us anywhere from ten days to two weeks, and then we report to the client.

(Deposition of Elmer LeGrand Goldsmith)

27Q. I show you a photostat of a copy of the letter dated September 20, 1934, and ask you if you can identify it?

A. I can identify it to this extent, that I believe it [612] is a carbon copy, and possibly one from Mr. Galt's files, of the original letter which came to me probably two or three days after its date as shown here, September 20, 1934, and it is the official report from him on my search sent to him by my letter of the 5th.

28Q. Have you the original of this letter in your files?

A. I do not. That was attached to the drawings and the carbon of my letter to Mr. Galt, it being his practice to send with his report all inclosures, including drawings, except the original letter of transmittal, and that he retained in his file. That is his practice and ours.

Mr. Neave: I will ask that the Galt letter of September 20, 1934, be marked as Plaintiff's Exhibit 26, for identification.

29Q. Did you render to Mr. Joseph Hayes any report after receiving Mr. Galt's letter of September 20, 1934?

A. That is my custom, and I feel certain that I did. However, that carbon of the report so rendered also was thrown away when we thinned out our files.

30Q. I show you a letter on the letterhead of Lockwood, Goldsmith & Galt, dated September 24, 1934, purporting to have been signed by Elmer L. Goldsmith, and ask you whether you recognize your signature, and whether or not this is the report which you made to Joseph Hayes?

A. May I see the Galt report to me? This is a letter [613] which I dictated to my secretary, Mrs. Kramer, whose initials appear on page 2, at the bottom, and my

(Deposition of Elmer LeGrand Goldsmith)

No. 4 again appears, the signature is mine, and I find quoted at the top of the page an abstract taken from Mr. Galt's report to me of the 20th. This letter is dated September 24, 1934, on our letterhead, and lists the patents by name, number, and date, which are referred to in his report by number only.

Mr. Neave: I ask that this letter from Mr. Goldsmith to Mr. Hayes, dated September 24, 1934, be marked for identification as Plaintiff's Exhibit 27.

31Q. Did you render any bill to Mr. Hayes for the work that you did for him in connection with the report which you rendered, as shown in Plaintiff's Exhibit 27?

A. Yes, we did.

32Q. Can you produce the bill or any copy of it?

A. I cannot produce the bill because that went to the client, but I can produce our office copy.

33Q. Will you do so, please, and compare the photostat I am handing you to see whether it is a correct copy of the original?

A. The photostat is a true copy of the bill to Mr. Hayes, dated October 1, 1934, referring to his search on September 5, 1934, and giving the amount of the bill, but it does not show the perforations that the original copy, not the original bill, would normally show. However, there is a mark [614] on there that does not show in the copy, and which I am unable to explain, and that can read, "1" a mark, and "4." That may be an "and" sign. I do not know what that means. The letters, "Pd. 10/8", I recognize the handwriting of Orpha McLaughlin, who is now Mrs. Mark Pangborn, of this city, and shows that Joe Hayes paid this bill on the 8th of October, Joe Hayes having established credit in our office. That is why he

(Deposition of Elmer LeGrand Goldsmith)

was not billed on that particular day that he ordered the search.

Mr. Neave: I offer in evidence photostatic copy of the copy of the bill to Mr. Joseph Hayes, dated October 1, 1934, as Plaintiff's Exhibit 28.

(Plaintiff's Exhibit No. 28, so offered in evidence, is attached to these depositions.)

34Q. Did you ever file a patent application on this disclosure for Mr. Hayes? A. Our firm did not.

Mr. Neave: You may cross-examine, Mr. Lyon.

#### Cross Examination

By Mr. Lewis Lyon:

35Q. How does it come, Mr. Goldsmith, that you are able to produce some portions of this record and some portions you are not able to produce at the present time, including the sketch or drawing that purportedly accompanied your letter of September 5, 1934, to Mr. Galt? [615]

A. I presume that the photostat copy of my original letter of transmittal to Mr. Galt was photostated and was produced and submitted to me for identification today. I believe he has all his files because he has a large garage in Hyattsville, and I think he keeps them out there. However, the drawing which accompanied that letter, and the carbon of my letter to Joe Hayes in response to that report, and the original letter of Mr. Galt to me reporting on the search, were thrown out three or four years ago when we stripped our files for more space.

36Q. Where did these particular copies come from then, Mr. Goldsmith, or are they copies?



(Deposition of Elmer LeGrand Goldsmith)

Mr. Neave: I might make a statement on the record here to shorten the examination I obtained photostatic copies of Plaintiff's Exhibit 25 from Mr. Galt. I have asked Mr. Galt whether he would be willing to come to Chicago and testify concerning this letter and Plaintiff's Exhibit 26, a photostatic copy of which I also obtained from him, in the event Mr. Lyon would not stipulate that these photostats might stand as the originals. I have with me here a letter from Mr. Galt in which he stated that a copy of a proposed stipulation which I had drawn up and had sent to him was correct, but that he would come to Chicago if it were necessary. The photostat, Plaintiff's Exhibit No. 27, was taken of the original of the letter in the files of Hayes Brothers, which [616] original will be produced tomorrow by a duly qualified witness.

A. I believe, Mr. Lyon, that answers your question. I would have surmised they were taken from the original sources in whose possession they have been.

37Q. What I am trying to find out, frankly, is where is this sketch that is supposed to accompany Exhibit 25 for identification?

A. That sketch was returned to me by Mr. Galt. He never mentions in his letters he is returning inclosures, as far as I can recall, but they always come back to the office here when they are sent down there. He retains only the original letter of transmittal.

38Q. Where is the sketch at the present time then?

A. You know as well as I do. I said it was stripped from our files, and the custom is in this building when any material is thrown out it is placed out in the halls in large piles. They get a truck and take it down in the basement, and then they bale it, and then it is sold as waste paper.



(Deposition of Elmer LeGrand Goldsmith)

39Q. Then you are certain that you do not have, nor does Mr. Galt have, nor does Mr. Hayes have a sketch?

A. I cannot speak for Mr. Hayes, but I am positive Mr. Galt does not have it and I am positive it is not in our files, or I would produce it.

40Q. Did you ever hear anything from Mr. Hayes in response to your letter to him of September 24, 1934? [617]

A. No, because Joe Hayes was at that time not in the best of health, and he usually leaves—still does, in fact—he usually leaves Indianapolis late in the fall and does not return until in the early spring; he goes to Florida practically every year. I would not say positively he has gone every year, but I would say that is his general practice. He is over 70 at the present time.

41Q. You never had any reply then from Mr. Joseph Hayes to your letter of September 24, 1934?

A. Nothing, unless I saw him at the Columbia Club or the Sciencetech Club and commented on what was he going to do about it, or something like that, but I have no recollection I ever raised the question. A search was made and a report was rendered. So far as my records show, that concludes the transaction.

42Q. Were you acting as attorney for the Frick people at the time you wrote this letter?

A. I was not. I was acting as Joe Hayes' personal attorney.

43Q. I mean outside of this particular communication, were you also employed by the Frick people?

A. I never heard of the Frick people. If I may have mentioned it in the letter there it was because Joe Hayes

(Deposition of Elmer LeGrand Goldsmith)

had repeated the matter to me. I have never been employed by the Frick people, so far as I know, or our firm. [618]

44Q. Then you statement in this letter of September 5, 1934 which says, "The Frick people, who have seen this device", etc., was a matter that was merely told you by Mr. Hayes, is that correct?

A. That is correct. And there are a lot of other statements in that letter that contain the same type of hearsay evidence or background.

45Q. By whom are you employed at the present time in this matter, Mr. Goldsmith?

A. Mr. Loeffel employed me when this matter first was brought to my attention again.

46Q. Mr. Loeffel of the Marlo Coil Company?

A. That is correct, and all bills have been rendered to the Marlo Coil Company.

47Q. And you are being compensated by the Marlo Coil Company for your services in giving this testimony?

A. I am not.

48Q. You expect to be?

A. I hope to enter a time charge.

49Q. To the Marlo Coil Company?

A. That is correct.

Mr. Lyon: That is all.

#### Redirect Examination

By Mr. Neave:

50Q. Do I understand from your cross examination that [619] the description contained in your letter of September 5, 1934, Plaintiff's Exhibit 25, is a statement of the disclosure that was made to you by Mr. Joseph Hayes?

(Deposition of Elmer LeGrand Goldsmith)

Mr. Lyon: Objected to as leading.

A. That is correct.

Mr. Neave: That is all, Mr. Goldsmith.

And further deponent saith not.

Mr. Neave: It is hereby stipulated by and between the parties hereto by their counsel, that if Dwight B. Galt were called as a witness of behalf of plaintiff in this case he would testify as follows:

(1) That he is a patent attorney, with an office in Washington, D. C., and the partner of Elmer L. Goldsmith a patent attorney with an office in Indianapolis, Indiana.

(2) That on September 8, 1934 he received at his office in Washington, D. C., a letter from Elmer L. Goldsmith, Indianapolis, Indiana, dated September 5, 1934, an exact photostatic copy of which is Plaintiff's Exhibit 25.

(3) That on September 20, 1934, in reply to said letter of September 5, 1934, he wrote a letter to Elmer L. Goldsmith, an exact photostatic copy of a carbon of which is Plaintiff's Exhibit 26.

(4) That said letter of September 5, 1934 and said carbon copy of reply dated September 20, 1934, have been and still are in his possession in his office files in Washington, D. C. [620]

Mr. Lyon: It is so stipulated.

Mr. Neave: I offer in evidence Plaintiff's Exhibits 25 and 26.

(Plaintiff's Exhibits 25 and 26, so offered in evidence, are attached to these depositions.)

Mr. Neave: The next witness is Mr. Stage, Charles E. Stage.

The Court: Are you skipping Simons?

Mr. Neave: Yes, skipping Simons.

The Court: You are not offering that?

Mr. Neave: Not offering that.

Mr. Lewis Lyon: Your Honor, I would like to offer the deposition of Earl Charles Simons, and I would like to read the cross examination.

The Court: You will have to read the direct then before the cross gets in.

Mr. Lewis Lyon: Then I will read the direct.

### EARL CHARLES SIMONS,

being first duly sworn to testify the truth, the whole truth and nothing but the truth, relating to said cause, deposes and says:

#### Direct Examination

By Mr. Neave:

1Q. What is your full name? [621]

A. Earl Charles Simons.

2Q. What is your residence address?

A. 944 North Tacoma.

3Q. That is in Indianapolis?

A. Indianapolis.

4Q. Will you state whether or not you and your father leased the premises of the Polar Ice Company on the corner of 10th and Tacoma Streets in Indianapolis from approximately October, 1936 until at least October, 1940?

A. Yes, but it was in April, 1936.

5Q. Was it April, 1936? A. Yes.

(Deposition of Earl Charles Simons)

6Q. I show you Plaintiff's Exhibits 18, 19, 20 and 21, and ask you whether each of those exhibits shows the premises which you leased from the Polar Company?

A. Yes, that is the same thing.

7Q. Referring to Plaintiff's Exhibit 21, will you tell me when you took over the lease in 1936 whether or not the arrangement of the piping and valves was as shown in this Exhibit 21?

A. As far as I know, they are the same; there has never been any changes made.

Cross Examination

By Mr. Lewis Lyon:

8Q. Mr. Simons, were you present when these photographs, [622] Exhibits 18, 19, 20 and 21 were taken?

A. Yes.

9Q. Who else was present?

A. Well, I cannot recall the man's name. This man was there.

Mr. Lyon: Pointing to Mr. A. G. Loeffel.

10Q. Anyone else?

A. And this man was there, you were there that time. (Pointing to Mr. Neave.) And there was some men from Hayes Brothers that was there. I cannot recall who else; I don't recall the names.

11Q. Has it been your practice since leasing this premises and this ice room to keep in that room not only ice but fresh milk, soft drinks, and other like commodities?

A. Well, yes.

12Q. I believe, Mr. Simons, that I in company with Mr. Hy Jarvis called at your place yesterday noon, did we not?

A. That is right.

(Deposition of Earl Charles Simons)

13Q. And at that time we took a temperature reading of the temperature inside the room on thermometer, and that thermometer showed the temperature in the room was a little over 33 degrees Fahrenheit. Isn't that correct?

A. That is right.

14Q. And there were in the room, besides what is shown in these photographs, an ice conveyor connected with a coin- [623] operated ice dispensing machine, isn't that correct?

A. That is right.

15Q. And on that conveyor at the time I was there there were pieces of ice of about 25 pounds, is that correct?

A. Twenty-five and fifty.

16Q. And those pieces of ice in the room were not frozen together, were they?

A. No.

17Q. And they were in a suitable condition for dispensing through that dispensing machine, were they not?

A. That is right.

18Q. Directly under the ceiling coil, as illustrated in Plaintiff's Exhibit 19, there were three cases of soft drinks, including one or more cases of Coca-Cola, were there not? Exhibit 19 is this one. Directly under that cooling coil on the floor there was three cases of these soft drinks, were there not?

A. Yes. We keep them there.

19Q. And in the opposite end of the room, I mean opposite from the ceiling coil, and in the portion not shown of the room as the room is illustrated in Plaintiff's Exhibit 18, there was fresh milk stored. Isn't that true?

A. That is right.

20Q. And you told me that that had been your custom to store such articles for the entire period that you had had [624] possession of this storage room. Isn't that correct?



(Deposition of Earl Charles Simons)

A. Well, we haven't handled milk ever since we have handled that station, but we have always had soft drinks.

21Q. How long have you stored milk in there?

A. Well, I would say in the last, oh, four years.

22Q. That is during the entire year?

A. Yes, the year 'round.

23Q. At the time we were there we inspected the water rot of the inside wall structure, the water rot as illustrated by the letter "W" and arrows in Plaintiff's Exhibit 19, and as it is also illustrated by the arrow "AA" in Plaintiff's Exhibit 18, did we not? A. That is right.

24Q. And that is water rot, is it not? A. It was.

25Q. And to your knowledge, that water rot condition has been prevalent in that ice room since you first leased the premises. Is that correct?

A. No, it was not that bad.

26Q. It has been getting progressively worse?

A. Yes.

27Q. But it was there when you first leased the premises? A. That is right.

28Q. It is a fact, is it not, Mr. Simons, that during the operation of this structure which you state you have [625] leased from the Polar Ice & Fuel Company, that you have had occasions when the spray pipes in the ceiling coil unit, as illustrated in Plaintiff's Exhibit 19, froze up, isn't that true?

A. Well, they have stuck some, yes, before I learned how to defrost it right.

29Q. And in order to get that sticking, as you say, or freezing up condition eliminated you turned off the condenser and compressor unit, as that structure is illustrated



(Deposition of Earl Charles Simons)

in Plaintiff's Exhibit 21 in front of you, and allowed the temperature of the coil to reach the temperature of the room, which eliminated the stuck or frozen up condition. Isn't that correct?           A. That is right.

30Q. It is also true, is it not, Mr. Simons, in viewing Plaintiff's Exhibit No. 19, as we inspected the structure yesterday, that the point "L" of the pipe "B", is higher than the point "M" of that same pipe "B"?

A. Yes.

31Q. And it is also true that this pipe "A" is similarly inclined between the points "R" and "S", isn't that true; that is, that the point "R" is higher than the point "S"?

A. I don't know about that one, but I do know this one is.

32Q. During the winter months it has been your practice [626] to disconnect the refrigerating unit as illustrated in Plaintiff's Exhibit 21, and not to operate that unit. Isn't that correct?           A. That is correct.

33Q. That is, maintaining a temperature in the storage room of approximately 33 degrees, as we saw it yesterday?

A. That is right.

34Q. And you endeavor to maintain through the use of the refrigerating machine a similar temperature during summer months, do you not?           A. That is right.

35Q. During the time that you have been storing milk in this storage room for the last four years, as you have testified, you have not at any time found that milk frozen, have you?           A. No.

36Q. And the same is true with respect to the soft drinks that you have stored in the room since you first took over the lease?

(Deposition of Earl Charles Simons)

A. Unless it is in the wintertime in real cold weather, sometimes it freezes down towards the vending machine there.

37Q. That is in the wintertime when you are not operating the unit? A. That is right.

38Q. But in summer months when you have operated the unit [627] you have never had the soft drinks freeze, have you? A. No.

39Q. Is it not a fact, Mr. Simons, that it is necessary to drain the water from this system in the shed which is outside of the storage room during the winter months to prevent water freezing in those pipes?

A. Well, now, I never take care of that. Polar always comes out every fall and disconnects all that, and why they disconnect it, I don't know. I never have a thing to do with that part of it.

40Q. But you do know if water was left in those pipes in that shed that the water would freeze?

A. That is right. It would freeze in there because there is no heat or anything in there.

Mr. Lyon: That is all.

The Court: Do you want to recess now until 2:00 o'clock?

Mr. Lewis Lyon: Yes, your Honor.

The Court: Very well. 2:00 o'clock.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p. m.) [628]

(Deposition of Earl Charles Simons)

Los Angeles, California, September 20, 1946, 2:00 o'clock p. m.

The Court: Ex parte?

The Clerk: No ex parte, your Honor. Further trial.

Mr. Lewis Lyon: I will go back to question 39, page 142, just to be sure, your Honor.

The Court: Very well.

39Q. Is it not a fact, Mr. Simons, that it is necessary to drain the water from this system in the shed which is outside of the storage room during the winter months to prevent water freezing in those pipes?

A. Well, now, I never take care of that. Polar always comes out every fall and disconnects all that, and why they disconnect it, I don't know. I never have a thing to do with that part of it.

40Q. But you do know if water was left in those pipes in that shed that the water would freeze?

A. That is right. It would freeze in there because there is no heat or anything in there.

Mr. Lyon: That is all.

#### Redirect Examination

By Br. Neave:

41Q. Mr. Simons, was the refrigerating unit operating yesterday when Mr. Lyon was out there?

A. No, sir.

42Q. What was the outdoor temperature yesterday, do you recall? A. I don't recall.

43Q. It what portion of the refrigerating room do you usually keep your milk?

A. Well, in the opposite end of the unit end.

(Deposition of Earl Charles Simons)

44Q. And that is true in the summer as well as the winter?           A. That is right.

45Q. You testified that occasionally there was a stuck condition. When there is a stuck condition, did you use the water defrosting shower?

A. No; that is generally what froze up a little bit on me.

46Q. Did it run at all?

A. No, sometimes it wouldn't run at all. That was before I learned how to operate the machine, but after all, I don't know, it has been quite some time, but somebody told me how to do it, and if I may show it here—

47Q (Interposing) Yes. Is that Plaintiff's Exhibit No. 21?

A. Yes. I always turned this valve "8" up here to defrost the machine, and when I did that and shut it off here that always left water in this line, and naturally at some time it would stick up here on this machine up here, and when [630] it did that I would just turn off the compressor here and let the fan blow until it got all the frost off the coils, and then turn it back on.

Mr. Lyon: Let the record show in the last statement when the witness pointed to the exhibit he pointed to the top of the coil unit, as shown in Plaintiff's Exhibit 18.

48Q. Has this McQuay refrigerator unit, which is shown in Plaintiff's Exhibit 19, as being attached to the ceiling, has that sagged from the ceiling?

A. Well, it looks like it has to me.

49Q. Did you examine it yesterday?           A. Yes.

50Q. How much is point "L" above point "M" as shown on Plaintiff's Exhibit 19?

A. I would say it is about an inch.

(Deposition of Earl Charles Simons)

51Q. Did you measure?

A. Measured it yesterday.

52Q. You testified as to the condition of the refrigeration room. Is it now in the same condition as it was in 1936?

A. You mean the walls and things like that?

53Q. Yes.

A. No, they are worse now than they were then.

Recross Examination

Q. By Mr. Lewis E. Lyon: 54Q Mr. Simons, in this [631] room is there a fairly even temperature maintained throughout the room during the time the unit is operating?

A. I would say so, yes.

Mr. Lyon: That is all.

By Mr. Neave:

55Q. What are the dimensions of the room, do you recall?

A. I don't recall.

56Q. What would be your best guess, your best estimate?

A. I would say it is about 25x15.

57Q. How high is the ceiling?

A. About six and a half foot, I would say.

Mr. Neave: That is all.

Mr. Neave: The next witness was Charles E. Stage, who was the office manager and in charge of the records of the Hayes Brothers, Inc., who sold the unit which we are claiming is a prior sale in this instance.

He produced Exhibit 27, which is the Goldsmith-Hayes letter of September 24, 1934, and he also produced the Hayes sketch which is Exhibit 29.

I offer the direct examination of this witness to be copied into the record.

There was no cross examination.

The Court: Very well.

Mr. Neave: There is also a stipulation on page 151 which [632] I ask be copied into the record. It relates to the sketch of Exhibit 29 to the effect that if Mr. Hayes were called as a witness he would testify that he made the sketch some time during the spring of 1934.

The Court: Very well.

### CHARLES E. STAGE

being first duly sworn to testify the truth, the whole truth, and nothing but the truth, relating to said cause, deposes and says:

#### Direct Examination

By Mr. Neave:

1Q. What is your full name, Mr. Stage?

A. Charles E. Stage.

2Q. Your residence address?

A. 452 North Dearborn Street, Indianapolis, Indiana.

3Q. Who are you employed by?

A. Hayes Brothers, Incorporated.

4Q. How long have you been employed by them?

A. Since March 5, 1923.

5Q. That is Hayes Brothers in Indianapolis?

A. Indianapolis, yes.

6Q. Are you the office manager and in charge of the office records? A. I am. [633]

7Q. I show you Plaintiff's Exhibit 17, which is a photostat of a carbon copy of a letter from Polar Ice &

(Deposition of Charles E. Stage)

Fuel Company to Hayes Brothers, dated May 2, 1934, and ask you whether you made a search at my request to see if you could find in the records of Hayes Brothers the original of this letter?

A. Is this the copy of the letter here?

8Q. This copy.

A. No, I couldn't find that letter at all; I couldn't find it anyplace.

9Q. I show you Plaintiff's Exhibit 27, which is a photostat copy of a letter dated September 24, 1934, from Elmer L. Goldsmith to Mr. Joseph Hayes, and ask you whether you looked in your records at my request to see if you could find the original of this letter, and if you found it, will you please produce it?

A. This is apparently the original of it right here that I found in Mr. Hayes' records.

10Q. The original you have produced of Plaintiff's Exhibit 27? A. That is right.

11Q. And that was in the files of Hayes Brothers?

A. That is right.

12Q. Is Mr. Joseph Hayes president of Hayes Brothers? A. Yes, sir. [634]

13Q. Where is he now?

A. He is vacationing in Florida, Miami, Florida.

14Q. Can you give me his address there?

A. 427 South West, 30th Road, Miami, 36, Florida.

15Q. At my request have you made a search of the records of Hayes Brothers to try to find any original sketches made by Mr. Hayes of a water defrosting installation? A. Yes, I have.



(Deposition of Charles E. Stage)

16Q. Could you produce anything that you found?

A. The only sketch I found was this sketch here.

Mr. Neave: I will ask that this sketch be marked as Plaintiff's Exhibit 29 for identification.

17Q. Are you familiar with the handwriting of Mr. Joseph Hayes? A. Yes, sir.

18Q. Can you tell me whether or not Plaintiff's Exhibit 29 was written by Mr. Joseph Hayes?

A. This is his handwriting.

19Q. Have you any personal knowledge as to when Plaintiff's Exhibit 29 was drawn or made, written and drawn?

A. No, I don't, unless he has a date on it here. I don't have any personal knowledge, though.

20Q. At my request, have you made a search of the records of Hayes Brothers to try to find any engineering [635] data or drawings of a refrigeration installation made by Hayes Brothers at the Polar Ice & Fuel Company service station at the corner of 10th and Tacoma Street?

A. Yes, sir, I have.

21Q. Did you find any?

A. I was unable to find any.

Mr. Neave: You may question.

Mr. Lyon: No cross examination.

Mr. Neave: It is hereby stipulated that the Notary may photostat or photograph Plaintiff's Exhibit 29, sending copy of the photostat or photograph to plaintiff and defendant's counsel, and mark a copy of the photostat or photograph as the original exhibit in evidence, returning the document offered in evidence today, to Mr. Stage, so it may be kept in the records of Hayes Brothers.

Mr. Lyon: That is satisfactory. In order to avoid any delay in these proceedings and any possibility of being required to go to Florida, I will stipulate if Mr. Hayes was called as a witness that he would testify he made this drawing or sketch, Plaintiff's Exhibit 29, and the accompanying writing, some time during the spring of 1934, if that is satisfactory.

Mr. Neave: That is satisfactory. I would like to offer in evidence Plaintiff's Exhibits 18, 19, 20, 21 and 27. [636]

(Plaintiff's Exhibits 18, 19, 20, 21 and 27, so offered in evidence, are attached to these depositions.)

Mr. Neave: The next witness was Charles Edward Martin, who leased the premises in 1934, and you will recall that it was Martin that Hays explained the operation of the unit when it was put it.

The Court: He so testified.

Mr. Neave: Yes. He identified the layout of the piping valves in plaintiff's Exhibits 18 to 21, and there was no cross examination.

I ask that this be copied into the record.

The Court: It may.

Mr. Lewis Lyon: There was no testimony about what the temperature of operation was.

Mr. Neave: That is correct.

The Court: From counsel's statement I assume that it was merely corroborate of the previous explanation of the layout which had been given.

Mr. Neave: That is correct, your Honor.

CHARLES EDWARD MARTIN

being first duly sworn to testify the truth, the whole truth, and nothing but the truth, relating to said cause, deposes and says: [637]

Direct Examination

By Mr. Neave:

1Q. What is your full name, Mr. Martin?

A. Charles Edward Martin.

2Q. What is your residence address?

A. 921 College.

3Q. Indianapolis? A. Yes.

4Q. Did you lease from the Polar Ice & Fuel Company a service station at the corner of 10th and Tacoma in the year 1934? A. Yes, sir.

5Q. During the period of your lease was there any refrigeration equipment installed?

A. Yes, sir.

6Q. Did you have any complaint concerning that equipment after it was first installed?

A. Yes. We couldn't get it defrosted right, and they were going to take it out.

7Q. Did they take it out? A. No, sir.

8Q. What was done to the equipment?

A. They put the defroster on—Hayes Brothers did, and—

9Q. (Interposing) Have you finished your answer? [638]

A. They put the defroster on and we didn't have any more trouble.

10Q. What did the defroster consist of?

A. Water.

(Deposition of Charles Edward Martin)

11Q. Water sprays down over the coils?

A. Yes, sir.

12Q. I show you Plaintiff's Exhibits 18, 19, 20, and 21 and ask you whether or not they are views of the premises which you leased from the Polar Ice & Fuel Company? A. Yes, sir.

13Q. Referring to Plaintiff's Exhibit 21 and to the piping and valves shown in that exhibit, do you recall whether or not the piping and valves as they were in 1934 when you leased that building were arranged in the same manner and are the same type of piping and valves as those shown in Plaintiff's Exhibit 21?

A. This was all put in after I came there.

14Q. You mean the piping?

A. Yes, sir. It was not hooked up when I first went in the station.

15Q. While you were still there what was done?

A. They installed the unit and the piping after I was in there, and I don't see any changes in any of it; it looks all the same to me.

Mr. Neave: That is all. [639]

Mr. Lyon: That is all.

Mr. Neave: Plaintiff's Exhibits 18 and 19 are the photographs, and on them they bear an endorsement "July 21, 1944, Bass Photo Company, I. H. Schafer," and Exhibits 20 and 21 bear a similar endorsement except that the date July 24, 1944, is there. I find that there is no stipulation that these photographs were taken on those dates as indicated on the photographs, and I ask Mr. Lyon whether he will not stipulate to that.

Mr. Lewis Lyon: Do you say that is when they were taken?

Mr. Neave: Yes.

Mr. Lyon: So stipulated.

The Court: Very well. Stipulation approved.

Does that finish the Indianapolis matter?

Mr. Neave: That finishes the Indianapolis matter.

I offer in evidence Exhibits 13 to 29 inclusive, which are the Indianapolis exhibits, your Honor.

The Court: Admitted.

(Plaintiff's Exhibits 13 to 29 inclusive, respectively, received in evidence.)

[Note: Plaintiff's Exhibits Nos. 13 to 21 and 23 to 29 will be found in the Book of Exhibits at pages 1127 to 1138 and 1139 to 1151.]

Mr. Lewis Lyon: We will offer Exhibit A, the sketch, attached to the deposition.

The Court: The depositions as read and referred to as taken, together with all the exhibits offered by either party [640] or both parties or each party or all parties are admitted.

(Defendant's Exhibit A received in evidence.)

[Note: Defendant's Exhibit A to Deposition of Witness Barton will be found in the Book of Exhibits at page 1547.]

Mr. Neave: The next series of depositions relates your Honor, to a prior use of the Illinois Steel Company at its South Works plant in Chicago. This is a dry blast

system somewhat along the lines of the one which we have previously seen.

I ask that the reporter copy into the record the stipulation which is contained on pages 2 and 3 of the depositions, just before the deposition of Nicholas L. Tominac.

It Is Stipulated by and between the parties by their counsel:

1. That the hearings in Chicago are held pursuant to notice served upon the defendant, and now before the Notary, Miss E. M. Franklin.

2. That the provision of Rule 26 (a) of the Federal Rules of Civil Procedure that depositions taken prior to service of answer shall be by leave of the court, is hereby waived.

3. That the witnesses shall be sworn by Miss E. M. Franklin, who is fully qualified under the provision of Rule 28, Sections (a) and (c) of the aforementioned Rules.

4. That the testimony given here shall be taken stenographically and transcribed by Miss E. M. Franklin. [641]

5. That the testimony, when transcribed, shall be submitted to the witness for examination and shall be read to or by him, and any changes in form or substance which the witness desires to make shall be entered upon the deposition by Miss E. M. Franklin, with a statement of the reasons given by the witness for making them.

6. That the signing of the depositions as read and corrected by the witness is hereby waived.

7. That Miss E. M. Franklin, after duly certifying the depositions, shall send them by registered mail to the Clerk of the District Court of the United States, Southern District of California, Central Division, for filing.

8. That the cost of the original transcript, exhibits, attendance fees and Notary's fees shall be borne in the first instance by plaintiff, but shall be eventually charged as taxable costs to the losing party.

NICHOLAS L. TOMINAC

called as a witness on behalf of the plaintiff, having been first duly sworn, testified as follows:

Direct Examination

By Mr. Neave:

Q1. Mr. Tominac, would you give us your full name?

A. Nicholas L. Tominac; T-o-m-i-n-a-c.

Q2. Where is your residence?

A. 9720 Commercial Avenue, South Chicago, Illinois. [642]

Q3. Where are you employed at present?

A. I am at present employed by the Carnegie-Illinois Steel Company.

Q4. What is your occupation?

A. Now I am a tool welder.

Q5. How long have you been employed by Carnegie-Illinois Steel Company, or its predecessor?

A. Since 1906. At that time it was Illinois Steel, not Carnegie.

Q6. What was your job when you joined the Illinois Steel Company in 1906?

A. I was a handyman in the steel works.

Q7. What was your next job with the Steel Company?

A. My next job was at the dry blast plant. That plant started building in the summer of 1906 and was finished in the fall of 1907, and I was given a job as a second engineer, that was my title, but I had charge of all the defrosting.



(Deposition of Nicholas L. Tominac)

Q8. Who were your immediate superiors?

A. Mr. Charles Leinert, he was the Chief Engineer, and the Assistant Chief was Mr. Albert Gaide.

Q9. Is Mr. Leinert still alive?

A. No. Mr. Leinert is dead.

Q10. How about Mr. Gaide?

A. Mr. Gaide is still living.

Q11. How long did you remain on this job? [643]

A. I remained on this job until they shut the plant down. That was about 1911 or 1912, something like that.

Q12. What is the purpose of a dry blast plant?

A. The purpose of a dry blast plant is to dehumidify the air or I had better say freeze the moisture out of the air to be used in the blast furnace department.

Q13. What did the dry blast plant consist of in the way of buildings?

A. First, was an engine room or compressor and a brine pump room, brine cooling room and refrigerator room.

Q14. Can you describe in a short manner what generally took place in each of these rooms?

A. Well, in the engine room the ammonia was compressed and sent up to ammonia condensers where it was cooled off and came back down there in a brine which goes through the coils and refrigerators to freeze the air.

Q15. What happened in the refrigerator building?

A. In the refrigerator building the air was going through the coils to freeze all the moisture out of the air, or better stated, to dehumidate it. The air was taken from the outside and blown into the fan, into the tunnel.

(Deposition of Nicholas L. Tominac)

Q16. Where was this tunnel?

A. The tunnel was down beneath the refrigeration building. In that tunnel there were seven doors, seven shutters, and each one of these shutters was open while the re- [644] frigerator was in good working condition, or working.

Q17. Where did these shutters lead the air to?

A. The shutters lead the air to the coils, and it goes right through the coils up to the suction opening which was on the top, two suction openings on the top.

Q18. Was the refrigerator building a big room, or was it divided up?

A. That was divided in seven compartments. There was pipes in each compartment.

Q19. Now, these pipes that you referred to, what did they have in them?

A. The pipes had a brine in there.

Q20. And what was the purpose of the brine?

A. The brine was to cool off the air.

Q21. Where did the air go to after it passed through these brine pipes?

A. It went right into the intake on the right of the last floor.

Q22. Is that the top floor?

A. The top floor.

Q23. And where did it go to from the top floor?

A. It goes from the top floor to the blast furnace department.

Q24. You mentioned that you were in charge of defrosting? [645]

A. Yes, sir.

(Deposition of Nicholas L. Tominac)

Q25. How was this defrosting accomplished?

A. The defrosting was done once every day to each compartment. Seven days a week, seven compartments. A compartment a day.

Q26. How was the defrosting accomplished?

A. Well, first I went down in the tunnel and shut off the intake of the air. Then I went up to the top floor and shut the shutters on the outgoing air.

Q27. Is that one compartment or for all compartments?

A. One compartment only.

Q28. One compartment that you would defrost?

A. Yes, that you would defrost.

Q29. All right.

A. Then I would pump the brine out of the whole system, out of all the pipes in that compartment. When that was done, I opened up the water valves and let the water play from the sprays right on top of the cooler and defrost it.

Q30. You are referring to sprays on top of the coils?

A. Yes, sir.

Q31. What was the piping system that was connected with these sprays?

A. Well, the main line was a 6-inch line, and that line come from the ammonia condenser. That was the cooling of compressed ammonia, the cooling water from compressed [646] ammonia.

Q32. Now, Mr. Tominac, do I understand from your statement that water was showered over the ammonia condenser coils and collected beneath the coils?

A. Collected on the bottom of the coils.

(Deposition of Nicholas L. Tominac)

Q33. And it was the water that was collected at the bottom of the coils after it had been over the ammonia condenser coils that went into the 6-inch pipe?

A. Correct.

Q34. Good. Now, where did the 6-inch pipe leading from the ammonia condenser go?

A. That led to the refrigerator building.

Q35. Was the refrigerator building next to the ammonia condenser building?

A. No, sir. It was right next to the brine cooler, and brine pump building.

Q36. So that the 6-inch pipe went from the ammonia condenser building over to the refrigerator building through the brine room?

A. They have a catwalk where the pipe was laying, and it was leading to the refrigeration room.

Q37. Now, as I understand it, you stated that you turned on the water in the water pipes that would lead the water to the spray headers, and the water would then defrost the brine, the brine pipes, is that correct? [647]

A. Correct.

Q38. Where did you turn on this water?

A. I had a main valve that was right in the hallway leading into the refrigerator room. There was an individual valve in each one of the compartments.

Q39. Was that in addition to the main valve?

A. Correct.

Q40. Tell me how long did it take to defrost the coils?

A. It all depends on how much frost or ice was on the pipes. It took as an average from three and one-half to five and one-half hours. That included pumping the brine and returning the brine into the compartments.

(Deposition of Nicholas L. Tominac)

Q41. How long would you think that would take to pump out the brine and pump it back again?

A. Forty minutes, and it took about twenty minutes to return the brine back again.

Q42. After the pipes had been defrosted, what did you then do?

A. After the defrosting I first shut off the main and shut off the 6-inch valve and opened up the 2-inch drain to drain the line.

Q43. When you opened this 2-inch drain, what line did that drain?

A. That drained all the line that was inside the building. [648]

Q44. The water pipe line?

A. The water pipe line, correct.

Q45. How often were these coils defrosted?

A. The defrosting was done days only, I started about ten o'clock in the morning and I was through around three o'clock in the afternoon, complete with everything. While I defrosted one compartment the other six compartments was in use, was working.

Q46. Who did the actual defrosting?

A. Myself.

Q47. After you had let the water out of the pipes by opening the valve in the drain, what did you do with respect to the shutters at the bottom and the top which you had closed?

A. I first would go down to the tunnel and open the shutters on the bottom, and let the air come in to dry the coils. After the coils were dried up I went to the engine room and notified the engineer that I am ready to put the brine back into the circulation. He says to me, "Okay."

(Deposition of Nicholas L. Tominac)

I went on and put the brine back in. Then I would go out when everything was ready and open up the shutters on the top to let the air go through again back to the blast furnaces.

Q48. You referred to opening a drain to drain the water out of the piping system in the refrigerator building. When you opened the valve on the drain line, did you leave that [649] valve open or closed?

A. Most of the time I would leave it open, but occasionally I shut it.

Q49. I show you a photograph marked R 119 5/2/16. I have marked on this picture an A with an arrow to a building.

A. Yes, sir.

Q50. Can you tell me what that building was?

A. This was the ammonia compressor building on the bottom, and on the top the ammonia condensers.

Q51. Of what plant?

A. Of the dry blast plant.

Q52. At the Illinois Steel Company.

A. Correct. The next building—

Q53. Excuse me just a minute.

A. All right.

Q54. And at what time are you speaking of, what year? Was it when you were working there?

A. Yes, I was working there; correct.

Q55. While the dry blast plant was in operation?

A. Correct.

Q56. I am marking B on the picture and ask you what that building is.

A. This is the brine pump room in the front and in the back is the brine cooling room.

(Deposition of Nicholas L. Tominac)

Q57. And I am marking C on the building on the left of [650] the picture. What is that?

A. That is the refrigeration building.

Q58. I have placed a D on the picture pointing to a pipe. Will you tell me what that pipe was?

A. This is that 6-inch line, water line, leading from the ammonia condenser, water for defrosting in the refrigerator building.

Q59. Is that the pipe which comes from building A?

A. Correct.

Q60. To building C? A. Correct.

Q61. I have marked E on the picture, with an arrow. Will you tell me to what object this arrow points?

A. The arrow points to the refrigeration building.

Q62. That is not a very good arrow, I can see.

A. No. You mean right in here (indicating)?

Q63. Yes.

A. Well, this is the 2-inch drain line.

Q64. Drain from where?

A. Drain from the refrigeration room 6-inch line.

Mr. Neave: Will the Notary please mark this as Plaintiff's Exhibit 30, for identification.

(Said photograph was marked for identification.)

Q65. I show you a drawing entitled "Dry Blast Plant Refrigerator Building 6" thawing-out water line. Illinois [651] Steel Co. South Works," which bears the No. 12406, and ask you whether or not it illustrates generally the water piping system in the dry blast plant which you have described in your testimony and which you tended while you were with the company?



(Deposition of Nicholas L. Tominac)

A. Everything is correct except the main water line, the valve. The valve is supposed to be here (indicating).

Q66. Where are you pointing on the drawing?

A. Is that the catwalk up here (indicating)?

Q67. Let us identify the building. A. Yes.

Q68. You are pointing to the drawing, on the right-hand side of drawing 12406 which figure is entitled "Brine Cooler Building," and you were pointing at a valve marked A? A. Correct.

Q69. Now, you say that is not correct?

A. That valve was inside the building, in the hallway.

Q70. Inside which building?

A. Inside the refrigeration building in that hallway.

Q71. Do you see the building on the right of the catwalk as you face this picture?

A. On the right, correct.

Q72. That is, the compressor building is on the left and the refrigerator building is on the right of this view?

A. On this view, correct. In here at this point [652] (indicating).

Mr. Neave: Just a moment. The witness is pointing to the right side of the figure entitled "Brine Cooler Building," approximately at the point marked with N on the side.

The Witness: On this side, correct.

Q73. What do you mean by "on this side"?

A. The valve in here, what shows on the photographic copy there was inside instead of outside, so was the drain in the hallway. Not in the compartment, just in the hallway going into the compartment.

(Deposition of Nicholas L. Tominac)

Q74. You are talking about the water valve and the drain valve? A. Correct.

Q75. There were two valves? A. Correct.

Q76. And they were both inside the refrigerator building.

A. Inside the hallway, in the refrigeration building.

Q77. But inside the hallway? A. Correct.

Q78. Were there any brine coils in the hallway?

A. No, absolutely not.

Q79. Was the hallway shut off from the brine coils?

A. Yes.

Q80. From the cooling compartments? [653]

A. Yes.

Q81. Have you any knowledge of what the outlet air temperatures were from the compartments that were in use?

A. Well, between 25 and 28 degrees Fahrenheit.

Mr. Neave: I ask that the drawing 12406 concerning which the witness has testified be marked for identification as Plaintiff's Exhibit 31.

(Said drawing was marked for identification.)

Q82. Do you know Alfred E. Mueller, M-u-e-l-l-e-r?

A. Yes, sir.

Q83. Who is he?

A. He was an engineer of the dry blast plant.

Q84. Was he working on the dry blast plant at the same time that you were? A. Yes, sir.

Mr. Neave: All right, Mr. Lyon.

(Deposition of Nicholas L. Tominac)

Cross Examination

By Mr. Lyon:

XQ85. How long, Mr. Tominac, has it been since you saw this dry blast air cooling operation?

A. What do you mean?

XQ86. How long ago was it that you last saw this operation?

A. Well, that is a good many years back. It was around 1912, 1911, or something like that. [654]

XQ87. And I understood you to say that that operation was discontinued at that time?

A. Yes, sir.

XQ88. And the building torn down?

A. Yes, sir.

XQ89. And the apparatus dismantled?

A. Yes, sir.

XQ90. So far as you know there was never any further use of it?

A. There was only one building and that was the compressor building, and they are using that now for a physical laboratory.

XQ91. Did you ever see this drawing which has been shown you here today, and which is marked Exhibit 31, for identification, before it was presented to you today?

A. Yes, sir.

XQ92. When?

A. I saw that two months ago, something like that.

XQ93. Where?

A. At the Carnegie-Illinois Steel.

(Deposition of Nicholas L. Tominac)

XQ94. Who showed it to you?

A. Mr. McCarthy.

XQ95. And who was Mr. McCarthy?

A. Mr. McCarthy was a consulting engineer, I guess, that is the way I know.

XQ96. That is what he told you, was it? [655]

A. That is what his title was on the letter.

XQ97. On what letter?

A. On his letter he wrote to me that he wanted to see me.

XQ98. You have that letter?

A. No, I have not it here. I can bring it or send it over whenever you want it.

XQ99. I would like to have it brought over.

A. Yes, sir.

XQ100. Will you do that?                      A. Yes, sir.

Mr. Neave: Do you want him to bring it personally or, send it?

Mr. Lyon: He can send it.

The Witness: I have the letter, I guess. I can send it over to you.

Mr. Neave: Why don't you send it?

The Witness: Okay.

Mr. Lewis Lyon: That letter I believe was sent. The letter was marked as Defendant's Exhibit B, your Honor, and I would ask that it be included in the deposition at this point.

The Court: Very well.

(The document referred to is, in words and figures as [656] follows, to wit:)

COPY OF DEFENDANT'S EXHIBIT B

Schwarz, Hughes & McCarthy  
Consulting Engineers  
225 Broadway  
New York City 7  
Barclay 7-0657

Elmer H. Schwarz  
Edward R. Hughes  
John S. McCarthy

October 11, 1944

Mr. Nicholas L. Tominac,  
9720 Commercial Avenue,  
South Chicago, Ill.

Dear Mr. Tominac:

Regarding the patent suit about which I interviewed you several weeks ago, the lawyer for the New York corporation which is being sued and which I am representing will be in Chicago on October 26th next, and would like to talk to you before he takes your testimony some time later.

I expect to be in Chicago on October 24th or 25th and will discuss the subject with you further at that time. I am writing you now so that you can arrange to meet the New York company's lawyer at the Stevens House some time on Thursday, October 26th, preferably early in the afternoon, and I am writing you now so that you can make arrangements to be absent from your work at that time. Of course I will recompense [657] you for any time lost or expenses incurred in connectiaon with the proposed conference.

Very truly yours,  
J. S. McCarthy

JSM:EH

(Deposition of Nicholas L. Tominac)

By Mr. Lyon:

XQ101 Mr. McCarthy at that time showed you this drawing, Exhibit 31, for identification, did he?

A. Yes, sir.

XQ102. Was anyone else present?

A. Only a couple of fellows that work in the babbitt shop.

XQ103. And who were they?

A. Babbitt men, but there was only us two together when we worked over it. They were in the building when he showed it to me.

XQ104. But they were not present when Mr. McCarthy showed you this drawing?      A. No.

XQ105. Did he point out to you on this drawing the fact that the pipes were not indicated correctly on the drawing?      A. No, sir.

XQ106. Who did?      A. Myself. [658]

XQ107. You mean you pointed it out to him?

A. I pointed it out to him, just exactly the way I thought by myself, I know it.

XQ108. Are you familiar and can you read a drawing.      A. To a certain extent.

XQ109. The only time that you have seen this drawing before today then is about two months ago when it was shown to you by Mr. McCarthy?

A. Correct.

XQ110. You never saw it at the time that you were working, as you state, on the dry blast air cooling system?

A. No, sir.

XQ111, This photostat or picture, Plaintiff's Exhibit 30, for identification, when did you first see that or another copy of that photograph?      A. Yesterday.

(Deposition of Nicholas L. Tominac)

XQ112. You did not see it before yesterday?

A. No, sir.

XQ113. What did you see at that time, a print or this photostat?

A. A regular photograph. [659]

Mr. Lyon: We object strenuously to the use of this indistinct photostatic copy of a print in the examination of this witness, particularly in view of the witness' testimony that as late as yesterday he saw a photographic print rather than a photostat thereof. The reason for the objection is that the photostat is so indistinct it is practically impossible to tell what is and what is not shown on the photostat.

Mr. Neave: The photograph itself will be produced tomorrow by the duly qualified witness, who will produce the photograph from the records of the company where it has been ever since it was taken in 1916.

Mr. Lewis Lyon: The point of our objection, your Honor, is that we did not have that material available for the cross examination of this witness, and that an indistinct copy was used, and that is all we have now, when a proper copy was in existence.

The Court: Is this the copy? This is more indistinct than the photostat that I have here.

Mr. Lewis Lyon: I have never seen the photograph. I don't recall seeing the photograph.

Mr. Neave: The photograph was produced when Mr. Lietz was called, and he was asked whether a photostat had been made.

The Court: Here is a photograph.

Mr. O'Hearn: This is the original. [660]

The Court: This is the original?



(Deposition of Nicholas L. Tominac)

Mr. Neave: And this is our stipulation on that on the next day:

"It is stipulated that the photograph produced by the witness may be placed in the custody of the notary to have a photograph taken of the photograph produced by the witness. When this has been done, the notary can then mark the photograph taken in place of that one produced by the witness, as Plaintiff's Exhibit 30-A, which is now offered in evidence in this case. The notary will then please return the photograph produced by the witness to Mr. Lietz at the Carnegie-Illinois Steel Company."

Mr. Lewis Lyon: That isn't the point of our objection.

The Court: The objection is overruled. Oh, pardon me. The point of your objection was?

Mr. Lewis Lyon: The point of our objection was that the witness testified from the photostat that was indistinct, when that was not the best evidence at that time.

The Court: The objection is overruled.

Mr. Lyon: XQ114 Now, Mr. Tominac, referring to this photostat, Plaintiff's Exhibit 30, for identification, is not this member right below the arrow leading from the letter D— A. Yes.

XQ115 A valve? [661]

A. That was a drain valve for this lead-in line for the whole system when it was not in operation.

XQ116. That member then that is indicated on that photograph which I will indicate by a lead line and arrow leading to the letter F— A. Correct.

XQ117 —is a drain valve, is it not?

A. Yes, sir.

XQ118. And that drain valve is outdoors?

A. Yes, sir.

(Deposition of Nicholas L. Tominac)

XQ119. In which of these buildings did you say the brine cooler coils were located?

A. The brine cooler coils, right in this building, in here (indicating).

XQ120. And is it not a fact that that 6-inch line D—

A. Yes, sir.

XQ121. Which is indicated on this photograph, Plaintiff's Exhibit 30, for identification, is laid on the catwalk, which I will indicate with a lead line and arrow and by the letter G, leads from the building to the building C and goes uphill in leading from building to the building C?

A. No. That was not uphill; that was downhill. There was a pitch on it.

XQ122. It went which way?

A. From in here, this way (indicating).

XQ123. This photograph is in error then or it is an [662] optical illusion in indicating that the catwalk was inclined from the building A to the building C?

A. That catwalk was made with a little pitch in it from this building out here, so the pipe was going down into the refrigeration with just a little bit of a pitch, a very little lower. The pipe line was right inside of that catwalk here (indicating).

XQ124. Then the pipe line D, the 6-inch pipe line, went down here? A. Just a little bit.

XQ125. In passing from the building A?

A. Yes, sir.

XQ126. To the building C, and continued down hill inside of the building C, did it?

A. It did, very little.

XQ127. But it was inclined downwardly?

A. It was inclined downwardly, yes.

(Deposition of Nicholas L. Tominac)

XQ128. That pipe—

A. Wait a minute, just a minute. It was inclined in here. When it come inside the building it was straight, right inside the building.

XQ129. Did you ever put a level on it?

A. No, I did not.

XQ130. Either inside or outside of the building?

A. No, sir. [663]

XQ131. Now, this valve that I have marked with the letter F and this 6-inch line which is laid on the catwalk G were all outside of any building, were they not?

A. That catwalk that you have photographed in here, yes.

XQ132. And the valve F was outside of a building?

A. Yes, sir. Inside, in here (indicating). There was a valve inside, in here, in the hallway before it goes to the compartment. That was your main valve to open up your water line in here. It was a regular hallway where the walkway was before you entered into the compartment.

XQ133. And that valve was inside the building just beyond the end of the catwalk G? A. Right.

X134. When you opened this drain valve—

A. The drain valve inside was ahead of the other valve, right in here (indicating). There was a 6-inch valve and a 2-inch valve connected into the 6-inch line to let that water out, to drain the water out of there, the water that was in the compartments.

XQ135. I think if you will just wait until I ask a question— A. I will.

XQ136. —and not volunteer statements, that both the Notary and I will be able to get along a lot better.

A. All right. [664]

(Deposition of Nicholas L. Tominac)

XQ137. Just wait until I ask you a question before you start to make a statement. A. All right.

XQ138. You operated this drain valve F on the outside of the building for the purpose of draining this 6-inch line so water would not freeze in that line, didn't you? A. When the building was not in operation.

XQ139. What do you mean, when the building was not in operation?

A. We did not operate during the winter months.

XQ140. And the purpose of that drain valve F was to drain the lines which would otherwise freeze—

A. This line in here (indicating).

XQ141. Just a minute,—during the winter months, is not that true? A. Correct.

XQ142. Now, you say you did not operate this system in the winter months, is that correct?

A. Yes, sir.

XQ142½. And the reason you did not operate the building in the winter months, or in any of the winter months— A. We did in some.

XQ143. Just a minute, please.

Let me have that question.

—was because the air was cold enough, is not that true? [665] A. Correct. You are right.

XQ144. And that air temperature might be anything from 35, 36, 37, or 38 degrees, is not that so?

A. About 35 degrees. It would be 35 degrees.

XQ145. And that is the condition that you always sought to establish when you did operate this system, is it not?

A. We established a little better when we operated than we did in the wintertime. We generally established around 25 to 28 degrees Fahrenheit.

(Deposition of Nicholas L. Tominac)

XQ146. Have you any records of the making of any readings of that temperature? A. Any records?

XQ147. Yes.

A. I have not got no records but I was taking readings once in a while just to prove to myself everything was going along all right, but we had a man in the office, a man to take the readings of all the temperatures of the system, the temperatures of the inlet line air and the outlet line air.

XQ148. And can you point out where those readings were taken?

A. The inlet air temperature was taken down by the air going into the compartment by shutters in the tunnel, while the air was going into the compartment, the inlet air, and the outlet temperature was taken on the top floor.

XQ149. Where on the top floor? [666]

A. Right in each individual compartment.

XQ150. Where in each individual compartment?

A. Right where that come in. There was a door to each compartment.

XQ151. You mean a door leading into each compartment? A. Yes.

XQ152. And that is where the temperature was taken?

A. Yes, sir.

XQ153. Was the temperature taken at any other place?

A. Well, we would take it once in awhile down there at the first floor,—the second floor, but most of the time the outlet air temperature was taken right on the top, right above the coils.

XQ154. Taken above the coils?

(Deposition of Nicholas L. Tominac)

A. Above the coils because your outlet was above the coils.

XQ155. How far above the coils?

A. About six feet above the coils.

XQ156. Above the coils? A. Above the coils.

XQ157. What was the size of these coils?

A. I don't recollect but I guess it was either a 2-inch or a 3-inch line.

XQ158. And how many of these coils were there in each compartment? [667]

A. Well, there was plenty. I could not say just exactly how many coils was in there.

XQ159. You have no idea?

A. No, I have not got no idea.

XQ160. How close were the coils placed together?

A. The coils were placed together about 6 inches apart.

XQ161. And how big was the room, or each compartment?

A. Do you want me to give a rough guess, because I never measured it. I would say about 12 by 36.

XQ162. And how high was each compartment?

A. About 12 by 12 by 36. That is just what I could think of it.

XQ163. And how much of the inside of this 12 by 12 compartment was occupied by the coils?

A. Everything except the walk on each side. One walk on the north side and one walk on the other side.

XQ164. And how wide were those walks?

A. Those walks was about, well, we will say 2 foot.

XQ165. How did you gain access to those walks?

A. Sir?



(Deposition of Nicholas L. Tominac)

XQ166. How did you get to those walks?

A. Each had a door.

XQ167. Doors where?

A. Doors to each compartment. From the main hallway there was a door to each compartment. Each compartment had a [668] separate door.

XQ168. This water which you say passed through this 6-inch line across the catwalk had been previously used for cooling the ammonia in the condenser, had it?

A. Correct.

XQ169. And it was therefore warmed by the operation of passing over the condenser, was it not?

A. Correct.

XQ170. Can you tell me any time or any date that you personally observed the temperature of the air leaving any one of the compartments which you say you defrosted?

A. Well, I have never taken the temperature of the compartments I defrosted.

XQ171. Can you tell me any time or any day during the time that you were employed when you took the temperature of the air leading from any of the compartments that you were not defrosting? A. Yes, sir.

XQ172. When?

A. Well, I might say once a week.

XQ173. What day was it?

A. I could not tell you that. By God, I would be a magician if I could tell that.

XQ174. What year was it?

A. Well, we will say '07, '08 and '09. [669]

XQ175. And was it your duty to take those temperatures? A. No, sir.



(Deposition of Nicholas L. Tominac)

XQ176. Can you tell me any day what the reading of the temperature was by the discharge of the air?

A. You mean the air that goes into the blast furnaces?

XQ177. The air that goes into the blast furnaces?

A. Between 25 and 28.

XQ178. That is the thermometer reading you are talking about as between 25 and 28 degrees?

A. Correct. Fahrenheit.

XQ179. Well, which did it read?

A. Well, sometimes 25, sometimes 26, sometimes 28. It all depends.

XQ180. What I am after, Mr. Tominac, is for you to give me a specific reading at any one time.

A. I don't get you right.

XQ181. Can you tell me any time what the specific temperature was in degrees of that discharge air? Not that it was so and so, but what was it?

A. It was 26 sometimes and sometimes it was 28.

XQ182. When was it 26?

A. Well, some days. It all depends how the operation—how the brine was cooled off in the cooling of the system.

XQ183. Do you remember any time you can say the thermometer read 26 degrees? [670]

A. That was when the coils were perfectly clear.

XQ184. Tell me when that was.

A. Right the day after defrosting.

XQ185. Can you remember any particular occasion that the thermometer read 26 degrees? I don't mean in generalities; I mean a specific date or time.

A. Well, it generally takes it to around about 2 o'clock in the afternoon, about Monday or Tuesday or any day. I could not exactly recollect which day.

(Deposition of Nicholas L. Tominac)

XQ186. Where was this thermometer placed?

A. Well, I take it along with me from the office.

XQ187. Just describe what you did with the thermometer?

A. It was a swinging thermometer, what you call a hygrometer, the one-half a wet bulb and the other half was dry and I would swing it around and then take the reading.

XQ188. Swing it around in what?

A. The atmosphere right above the coils.

XQ189. And you got two temperatures, didn't you?

A. Yes, sir.

XQ190. Can you tell me any time what the two temperatures were?

A. I don't remember that, but I remember on the dry one what it was.

XQ191. You have no idea of what the corresponding wet bulb temperature was at the same time? [671]

A. No, sir.

XQ192. And you cannot remember a specific occasion what the exact reading of the dry bulb was, can you?

A. I could tell that.

XQ193. You could tell that? A. Yes.

XQ194. Exactly what the reading was?

A. Yes.

XQ195. What was it? A. 26 and 28.

XQ196. When?

A. When I was taking it. One o'clock in the afternoon or 2 o'clock in the afternoon, whenever I took it. Once a week.

XQ197. You took it once a week? A. Yes.

(Deposition of Nicholas L. Tominac)

XQ198. But you cannot remember any month or any specific year?

A. Well, at that time I was employed over there.

XQ199. But it was not your duty to take those temperatures? A. No, sir.

XQ200. It was some one else's duty?

A. Yes, sir.

XQ201. Did anybody else take them?

A. Yes, sir. [672]

XQ202. Did they make a record of them?

A. Absolutely.

XQ203. Do you know what that record was?

A. I could not tell you.

XQ204. Have you made an effort to locate that record? A. No, sir.

XQ205. Do you know whether any effort has been made to locate that record?

A. I think there has been.

Mr. Lyon: XQ206. Did it make any difference in the operation of this plant in any of the readings that you say you took as to whether or not it was raining or dry, of the temperature outdoors, and by "readings" I mean the reading of the discharge air from this cooling?

A. It was a little different whenever it was raining outside than when it was dry, when it was perfect dry.

XQ207. Did you ever find while it was perfectly dry what the temperature was?

A. It was the lowest then.

XQ208. What was the lowest? A. 26.

XQ209. What do you mean by "perfect dry"?

A. It was dry weather outside, no humidity.

(Deposition of Nicholas L. Tominac)

XQ210. Did you make at any time any measurements of the relative humidity outdoors? [673]

A. No, I did not.

XQ211. What was the temperature when it was raining outdoors? A. Well, it was always higher.

XQ212. How much higher?

A. Around 28 degrees.

XQ213. It never got over 28 degrees?

A. I could not tell that. It did sometimes go up to 30, but that was very seldom.

XQ214. Did it ever go above 30?

A. Whenever I did take it I never saw that it was over 30. It might, but when I was taking it it was never over 30.

XQ215. Now, this drainpipe that you say was over the coils, you say it was horizontal? A. Yes, sir.

XQ216. That is, perfectly flat? A. Yes, sir.

XQ217. This drain valve then was right in the 6-inch pipe, right beyond or toward the coils from this 6-inch inlet valve and inside the building, is that correct?

A. Yes, sir.

XQ218. And that drain valve was in a horizontal pipe? A. Yes, sir.

XQ219. You say that your operation was to turn off this 6-inch valve? [674] A. Correct.

XQ220. And then to open the drain valve?

A. Yes, sir.

XQ221. Then isn't it a fact that you opened the inlet shutter at the bottom of each of these tunnels?

A. That was true, yes, sir.

XQ222. I mean that was your next operation?

A. Yes, sir.

(Deposition of Nicholas L. Tominac)

XQ223. And how long did you allow the air to blow into this compartment before you turned on the brine?

A. About half an hour.

XQ224. And how long after you turned on the brine was it before you opened the discharge shutters at the top of this air tunnel?

A. Just as soon as I seen that frosting started to accumulate on the pipes.

XQ225. How long was that?

A. It takes another half an hour.

XQ226. Then this entire system after you state that you opened this drain valve was put out of operation for approximately an hour for the purpose of drying out the water in the spray pipes, wasn't it?

A. Half an hour for drying out and half an hour after—I mean the brine started circulating. Until they started frosting, really. [675]

XQ227. During this hour of nonoperation and at the time you were drying out the header pipes with air, did you ever take the temperature inside any one of these compartments? A. No, sir.

XQ228. Do you know how much above-freezing the temperature was during that operation?

A. Well, it was cold enough to wear a coat.

XQ229. Isn't it a fact that you were blowing air directly into this compartment from the outside during that operation? A. Correct.

XQ230. And that that air might be, in the summer days when you state these operations occurred, as high as 80, 85 or 90 degrees?

A. Yes, sir, but the pipes was empty.

(Deposition of Nicholas L. Tominac)

XQ231. And the pipes were empty?

A. Correct.

XQ232. That is, there was nothing in the pipes to cool the air at that time?

A. Correct, but your brine, it was pumped out of the compartment, it was pumped out in a tank upon the roof lined with cork to keep the brine cold. The brine went up to a temperature of about 35 degrees and it stayed there during the operation and did not have much chance to cool off.

XQ233. This brine that you pumped out of these coils then was about 35 degree brine? [676]

A. Correct.

XQ234. And that was the brine which was used for the purpose of cooling air, wasn't it? A. Correct.

XQ235. And the purpose of pumping that brine up to the storage tank on the roof was to keep the brine from raising in temperature, wasn't it?

A. Absolutely, while you were defrosting.

XQ236. You had observed the temperature of this brine that you pumped out immediately upon closing the inlet and outlet for the air, is that correct?

A. Yes.

Mr. Lyon: That is all.

#### Redirect Examination

By Mr. Neave:

RDQ237. Mr. Tominac, during the defrosting operation of any particular compartment, was air blown through the compartment that was being defrosted?

A. No, sir.

(Deposition of Nicholas L. Tominac)

RDQ238. During the examination by Mr. Lyon, I understood Mr. Lyon to ask you a question in which he said that the drain pipe was over the coils. Was there any drain pipe over the coils or was there a spray pipe over the coils?

A. There was a spray pipe over the coils but that was lower than the original 6-inch line. [677]

RDQ239. That is, the spray pipe nozzle was lower than the supply line of the water? A. Correct.

RDQ240. After the defrosting operation had taken place and you shut off the water valve, was there any other valve that you opened or closed?

A. Yes. I closed the main valve right in that hallway and opened the drain.

RDQ241. That was the drain valve?

A. That was the drain valve to drain the 6-inch line inside the compartment.

RDQ242. Inside the compartment itself?

A. Yes, sir, and the sprays was lower than the 6-inch line. They drain themselves right through those holes while they were sprinkling.

RDQ243. And that was the drain valve F that you referred to on Exhibit 30?

A. That was the valve inside the building, not outside.

RDQ244. It was controlled from inside the building?

A. Correct.

RDQ245. Have you ever had any trouble with water pipes freezing inside of the refrigeration building?

A. To my recollection, no, sir, because the pipe was covered with this cork and black pitch. [678]



Mr. Neave: Now, the next deposition I will not read, your Honor, but I will summarize and then ask that the direct examination be copied into the record. It is the deposition of the witness Albert Gaide. He worked at the South Works of the Illinois Steel Company from 1907 to 1911, and he erected the refrigeration machinery and was assistant supervisor of the dry blast plant a part of the time, and a part of his duties were to see that the temperature and other readings were taken. Mr. Gaide has produced thirty-nine temperature charts forming Exhibit 32. These temperature charts he testified were the original daily record sheets from which the data had been transferred to other sheets by the people who had taken the temperature readings, and he kept these original sheets in a trunk in his own home. If your Honor will turn, say, to the first sheet—

Mr. Lewis Lyon: Your Honor, pardon me just a minute, Mr. Neave, but I think that is a very bad statement of the evidence. I think that this witness testified that as to these particular records he took them out of the waste-paper basket, that they had been thrown away, and it was never established at any time that they were a part of the records of the company; at least, some of them, to my recollection.

The Court: Let us see what the record says. That is the best way to settle it.

Mr. Lewis Lyon: I think that is correct. [679]

Mr. Neave: On page 47—

Mr. Lewis Lyon: On page 47—

Mr. Neave: Let me read it, if you will, it being my deposition. On page 46, at the bottom of the page, there is the question:

"Q37. That was as to the temperature of the air entering the compartments?

"A. Yes, sir.

"Q38. What about the temperature of the air leaving the top of the compartments?

"A. Well, that was most generally below 30 degrees, around 20 to 36, and in the wintertime much colder. That is another seasonal condition that changed that considerable.

"Q39. Have you at my request made a search to see if you could find any records of these temperature conditions?

"A. I have.

"Q40. Have you found any?

"A. I have.

"Q41. Would you produce them, please?

"A. (Witness produces documents.)

"Q42. Now, where have these records been, Mr. Gaide?

"A. These have been in the engine room office of Mr. Leinert. [680]

"Q43. Until what time?

"A. Until around 1910.

"Q44. And then what happened to them?

"A. Well, these I took out around that time. I got them out of the waste-basket, you might say, these here.

"Q45. Where have they been since you got them out of the waste-basket?

"A. I have had them home in a trunk in the attic."

Then I will refer to his redirect examination:

"RDQ192. As I understood your testimony on redirect,"—that should be "direct" instead of "redirect"—

"Mr. Gaide, the temperature man would make records on sheets of paper such as are shown in Plaintiff's Exhibit 32, and then that data would be transferred to what you call daily records, is that correct?"

"A. That is it.

"RDQ193. And when you told Mr. Lyon that you knew of no instance where the daily records were thrown away, you referred to the sheets to which this data, sheets such as Plaintiff's Exhibit 32, were transferred, is that correct?"

"A. Yes."

Then there is another point.

The Court: Let's wait until we get to the redirect. Let's [681] have all the direct first. That is all there is on direct.

Mr. Neave: Yes. I think there is something in the cross that I am thinking of on the same subject, but that will be brought out, I think.

The Court: Very well.

Mr. Neave: I might also interject that there is a stipulation that if the man in charge of the engineering records of the company were called he would testify that the records had been destroyed, so that they would be the only records available to us.

Mr. Lewis Lyon: That last was not a part of the stipulation.

Mr. Neave: No, that was not the stipulation as I understand—

Mr. Lewis Lyon: Pardon me. You just hung it on to the stipulation.

Mr. Neave: I am sorry. I did not mean to give the impression that it was a part of the stipulation.

The Court: Have you finished with his direct?

Mr. Neave: Yes, except to call your Honor's attention to the fact that in his direct examination he described what these various columns meant in these various sheets, and that the fourth column from the left was the temperature of the air at the top of the coil, as indicated at the top of the column.

The Court: Now, just a minute. Oh, the fourth column, [682] entitled "Top of Coil"?

Mr. Neave: That is right, sir.

The Court: That was the temperature?

Mr. Neave: Yes.

The Court: What is this psychrometer?

Mr. Neave: I believe the psychrometer is one of these things that you swing around.

The Court: A whirling thermometer?

Mr. Neave: Yes, it is a wet and dry bulb thermometer.

The Court: Now, does that indicate whether it is the top of the coil, or what?

Mr. Neave: On the psychrometer?

The Court: Yes.

Mr. Neave: No, that isn't indicated, but I believe in his testimony he does refer to it, although I can't remember now just where he said that was taken. I think that these readings were on an electric machine, but I am not sure. I would have to look that up, if you want it.

The Court: A lot of these do not seem to be identified by date. Oh, ending 6 A. M., June 13th, I see.

Mr. Neave: Yes. They were either for a night shift or a day shift that the particular man took the temperatures, and that was when he went out, and it was for the period as you will see. You see down in the first column to the left are hours, and the readings in there opposite the hours are [683] indicated on the chart.

The Court: Yes.

Mr. Lewis Lyon: There is no testimony of any person who ever took these that they are true records of the company. The only testimony is that it is something that this man picked out of the waste-basket.

The Court: Did you have some cross examination?

Mr. Lewis Lyon: Yes.

The Court: What do you want done about that?

Mr. Lewis Lyon: I will ask that the cross examination be included in the record so that the whole record would be before the court.

The Court: Do you want to draw any of it to my attention now?

Mr. Lewis Lyon: No, I don't think there is any of it now, your Honor, that it is necessary to have brought to your attention, as I recall.

Mr. Neave: I would like to have the redirect examination, which is on pages 80 and 81, copied into the record.

The Court: So ordered.

Mr. Neave: And there is a statement on page 82 which I made, which I would like to have copied into the record, which is in regard to the McCarthy letter that was produced. [684]

ALBERT GAIDE,

called as a witness on behalf of plaintiff, having been first duly sworn, testified as follows:

Direct Examination

By Mr. Neave:

Q1. What is your full name?

A. Albert Gaide.

Q2. Albert Gaide? A. Albert Gaide.

Q3. And your residence?

A. 2236 South Winchester Street.

Q4. Milwaukee? A. Milwaukee.

Q5. Where do you work at the present time?

A. Nordberg Manufacturing Company.

Q6. Is that in Milwaukee? A. In Milwaukee.

Q7. And what is your trade?

A. Pipe fitting line. It is maintenance work I am doing there.

Q8. Were you ever employed by the Illinois Steel Company? A. Yes.

Q9. When was that?

A. That was between 1907 and after 1910. Between [685] 1910 and 1911.

Q10. 1907? A. 1910. Between 1907 to 1911.

Q11. What work were you doing for the Illinois Steel Company?

A. I was first assistant to Leinert, Chief Engineer.

Q12. And actually what work were you supervising in the plant?

A. Well, I had charge of the plant while Leinert was gone.

Q13. What plant was that?

A. Dry blast plant.

(Deposition of Albert Gaide)

Q14. How did you happen to work for the Illinois Steel Company?

A. I was sent down there from the Vilter Manufacturing Company, Milwaukee, Wisconsin.

Q15. Why were you sent down there by them?

A. I worked on the erection of the refrigerating machinery.

Q16. Did the Vilter Company supply some of the refrigerating machinery?

A. They supplied the compressors, the engines, the ammonia condensers and the brine coolers.

Q17. Did any frost accumulate on the brine coolers?

A. In the refrigerating department while they were [686] dehumidifying the air there the frost accumulated.

Q18. By "brine coolers" you had reference, did you, to the cooling with the ammonia gas?

A. The cooling of the brine by the ammonia gas.

Q19. Well, let's get this straight. As I understand it, you had an ammonia plant and then you had a condenser unit?

A. A condenser unit.

Q20. And then you had a refrigerator building?

A. We had 80 stacks of double-pipe brine coolers where the brine was cooled and it was pumped into these seven compartments where the air was dehumidified.

Q21. And these seven compartments you are referring to were in which building?

A. They were in a separate building by themselves.

Q22. Did you call that the refrigeration building?

A. That is the refrigeration building.

Q23. You state that frost accumulated on the brine coils in the refrigerator building?

A. Yes, sir.



(Deposition of Albert Gaide)

Q24. How did you get that frost off the coils?

A. We sprayed water over the top. Shut off whatever compartment we wanted to thaw off and sprayed water over the top.

Q25. Over the top of the coils?

A. Over the top of the coils. [687]

Q25½. Did that remove the frosting from the coils?

A. Oh yes. Could I mention something in regard to where I mentioned a separate building?

Q26. Yes. Go ahead.

A. They had separate departments like the compressor room was on the ground floor and over the compressor room we had your ammonia condensers, and then to the one side was the brine coolers and next to that your refrigerating coils. Then there was another separate room for the brine pumps. The buildings were scattered all over.

Q27. Mr. Gaide, what were your duties as assistant supervisor of the dry blast plant?

A. Well, I saw that the readings were taken.

Q28. Which readings are you referring to?

A. The temperature readings and the humidity readings. For instance, we had the brine inlet, the brine outlet, the water temperature inlet, the condenser and the water temperature outlet, the atmosphere temperature outside, the air temperature entering the refrigerating rooms—compartments, rather. And we took humidity readings, dry and wet-bulb readings of the air entering the compartments and the air temperature leaving the compartments, and the humidity readings of that air.

Q29. Whose business was it to take these readings?

A. We had a regular temperature man. [688]

(Deposition of Albert Gaide)

Q30. A temperature man?

A. We called him a temperature man.

Q31. And what did they do with these temperatures after they took them?

A. That was entered on a big sheet, a daily report sheet after they scribbled it off on scratch paper, what I call it, lined paper.

Q32. And then they transferred these figures from the scratch paper as you call it—

A. To daily report sheets.

Q33. And where did those daily report sheets go?

A. Well, off the original they made several blueprint copies that were scattered around through different departments throughout the plant. I don't know just who got them.

Q34. Did your office get any? A. Yes.

Q35. Were you familiar with these temperature readings? A. Well, pretty much so. I should be.

Q36. Do you recollect what the temperatures were in the refrigeration building in the compartments that were in operation?

Mr. Lyon: That is objected to as calling for secondary evidence and not the best evidence, and incompetent, irrelevant and immaterial, this witness having not testified that he ever took any readings himself. [689]

Mr. Neave: You can answer the question.

Mr. Lyon: And hearsay.

The Witness: I can answer your question?

Mr. Neave: Yes. You can answer my question.

The Witness: You asked about the temperatures?

Mr. Neave: Yes. Do you want the question read?

The Witness: Yes.

(Deposition of Albert Gaide)

(The question was read, as follows: "Do you recollect what the temperatures were in the refrigeration building in the compartments that were in operation?")

A. Well, that depended upon the weather conditions as far as entering the bottom, seasonal conditions, you might say.

Q37. That was as to the temperature of the air entering the compartments? A. Yes, sir.

Q38. What about the temperature of the air leaving the top of the compartments?

A. Well, that was most generally below 30 degrees, around 20 to 36, and in the wintertime much colder. That is another seasonal condition that changed that considerable.

Q39. Have you at my request made a search to see if you could find any records of these temperature conditions? A. I have. [690]

Q40. Have you found any? A. I have.

Q41. Would you produce them, please?

A. (Witness produces documents.)

Q42. Now, where have these records been, Mr. Gaide?

A. These have been in the engine room office of Mr. Leinert.

Q43. Until what time? A. Until around 1910.

Q44. And then what happened to them?

A. Well, these I took out around that time. I got them out of the waste-basket, you might say, these here.

Q45. Where have they been since you got them out of the waste-basket?

A. I have had them home in a trunk in the attic.

(Deposition of Albert Gaide)

Mr. Neave: In order to be able to refer to these records, I ask that the bunch of records stapled together, consisting of 39 pages, which the Notary has stamped with page numbers in the right-hand upper corner from 1 to 39, I ask that the entire group of 39 pages be marked as Plaintiff's Exhibit 32, for identification.

(Said records were marked for identification.)

Q46. Now, referring to Plaintiff's Exhibit 32, page 1, I see that this page 1 is headed "Illinois Steel Company South Works. Dry Blast Plant Engine Room Report," and that [691] there is a date saying "Ending 6 a. m. May 15, 1910." Will you state whether or not this is the type of record that was handed in by the temperature men that were under your supervision while you were with the Illinois Steel Company at the dry blast plant?

A. On the night shift, the night man—

Q47. Will you answer the question, first, please?

A. Yes.

Q48. What were you going to say?

A. What I was going to say is that the night engineer, toward the end, he was taking care of the temperature readings. Now, whether the temperature man on the night shift was on at this time or not I don't know.

Q49. Who was it that took care of the temperature readings at night?

A. Well, there for a while we had temperature men there.

Q50. And then after that?

A. And then after that, so Nick tells me, who was there—

Q51. I only want what you yourself know and recollect. First of all, tell me, were you with the dry blast

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plant as assistant superintendent in May, June, July and September of 1910?           A. Yes.

Q52. You were? [692]           A. Yes.

Q53. Now, referring again to Plaintiff's Exhibit 32, page 1, I see at the top of the page there are several columns. First of all, we have "Weather Conditions," and under that there are no entries, are there?

A. No.

Q54. The next column is headed "Temperature," which covers two columns. Under "Temperature" in one column is "Atmosphere" and in the second column "Top of Coil." Now, what do the entries in the column marked "Temperature Atmosphere" refer to?

A. That is the outside air.

Mr. Lyon: Just a minute. That is objected to on the ground the witness has not been qualified to answer the question.

Mr. Neave: Go ahead and answer.

A. That was the outside temperature.

Q55. Of the air?           A. Of the air.

Q56. And in the second column is the heading "Top of Coil." What do the entries under that column mean?

A. That was the temperature of the air about to leave the dry blast plant refrigerating coils.

Q57. Where was that temperature taken?

A. On top of the coils. [693]

Q58. The fourth column has a heading "Psychrometer," a sub-head "Inlet," and a column under that sub-head "Dry." What do the entries in that "Inlet Dry" column refer to?

A. That is the temperature of the air entering the refrigerating compartments at the bottom.

(Deposition of Albert Gaide)

Q59. The fifth column is "Inlet Wet." What does that mean?

A. That is the temperature of the air leaving—

Q60. "Inlet Wet"?

A. Oh, that is the temperature of the wet bulb thermometer of the psychrometer.

Q61. At what point?

A. That was taken at the bottom of the refrigerating coils.

Q62. The sixth column is headed "Outlet Dry." What are the figures entered in this column?

A. That is the temperature of the air about to leave the refrigerating compartments.

Q63. That is over the coils? A. Over the coils.

Q64. The seventh column is entitled "Outlet Wet." What do the entries in this column mean?

A. That is the temperature of your wet bulb thermometer when you swing your psychrometer.

Q65. At what point?

A. At the top of your refrigerating coils. [694]

Q66. The last two columns have a common heading, "Moisture Grains Per Cubic Foot" with a subdivision, the next to the last column being "Inlet." What do the figures entered in this column mean?

A. Grains of moisture per cubic foot entering the refrigerating coils.

Q67. That would be at the bottom?

A. At the bottom, entering the refrigerating coils.

Q68. And the last column is headed "Outlet" under "Moisture Grains Per Cubic Foot." What do entries under this column mean?



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A. That is the grains per cubic foot leaving the refrigerating coils—compartment, rather.

Q69. At the top of the compartment?

A. At the top, yes.

Q70. Now, referring to pages 2, 3, 4, 5, 6, 7 and 8 of Plaintiff's Exhibit 32, they all have the same headings, do they not? A. You mean here, this heading?

Q71. Yes. A. Yes.

Q72. I call your attention, however, to pages 2 through 8, which have certain entries under "Weather Conditions." On page 2 there is the word "Brine" in that column and figures under that word. To what does that refer? [695]

A. One is the brine inlet and the other is the brine outlet.

Q73. Temperatures? A. Temperatures.

Q74. That is the temperature?

A. The temperature of brine going into the refrigerating coils and the temperature leaving the coils.

Q75. Is that true also of page 3? A. It is.

Q76. Page 4? A. It is.

Q77. Page 5? A. It is.

Q78. Page 6? A. It is.

Q79. Page 7? A. It is.

Q80. And page 8? A. It is.

Q81. Now, turning to page 9 of Plaintiff's Exhibit 32, which is on a yellow sheet of paper, can you tell me what these yellow sheets of paper which consist of pages 9 through 39 consist of?

A. Well, they consist of the air temperatures outside, entering the compartments. [696]



(Deposition of Albert Gaide)

Q82. Are these reports that were made by the temperature man?

A. Those are reports made by the temperature man.

Q83. I see. I note that on page 9 there are a number of columns. The first one is marked "Time." The second is "Atmosphere In," and "Top." To what does that refer?

A. The "Atmosphere In" is the outside atmosphere temperature.

Q84. And the "Top"?

A. Is as it leaves the top or refrigerator coils—compartment, rather.

Q85. That is the temperature?

A. That is the temperature.

Q86. The column "Inlet Dry" and "Wet," what does that mean?

A. That is the temperature shown by psychrometer readings taken at the bottom of your refrigerator,—compartment.

Q87. For both dry and wet bulbs?

A. For both dry and wet bulbs.

Q88. And the column "Outlet Dry" and "Wet" refer to what?

A. Psychrometer readings of the air leaving the top of the compartments, refrigerating compartments. That is the temperature of the air.

Q89. Then the next two columns are entitled "Moisture Inlet" and "Outlet." [697]

A. That is the grains of moisture per cubic foot entering the bottom of the refrigerating coils, and the outlet is the grains leaving the top of the coils.

(Deposition of Albert Gaide)

Q90. The next two columns are entitled "Brine Feed Ret." What do those entries in those columns signify?

A. The brine feed is the temperature of the brine entering the top of the refrigerating coils.

Q91. And what is the column entitled "Ret."?

A. That is returned. That is the temperature leaving the bottom of the coils.

Q92. Would you look through pages 10 to 39 and see whether the headings are the same on those pages as you have described for page 9? I am talking about the headings.

A. Just the headings, you mean?

Q93. Just the headings?

A. There seems to be a little difference here on 33.

Q94. Page 33. In what column is that?

A. Right here (indicating).

Q95. The last two columns. What is the heading of that? Can you read it?

A. I don't know. It looks like "Top" to me.

Q96. How about "Dope"?

A. It might be dope but it looks like top to me. I don't know.

Q97. Do you know what the significance of it is? [698]

A. No. I have not got the least idea what that would be. This would be the grains of moisture.

Mr. Neave: Referring to the column under what looks like "Dope Dry Blast," the witness is pointing to that column.

Q98. Now, what were you saying, Mr. Gaide?

A. That looks like the grains of moisture in the air per cubic foot leaving the top of the,—what do you call

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it, the refrigerating coils. That is what it would be if it is checked up, Dry Blast, is it? And 1.83.

Mr. Lyon: That indicates, does it not, that there is more leaving than is entering?

The Witness: I don't know. I am not sure about this.

Mr. Neave: Q99. You are not sure what the meaning of that column is?

A. No, I don't know what it means, but I could figure out from the decimal point that it pertains to grains of moisture and cubic feet of air.

Mr. Lyon: There is more leaving than entering on that sheet?

The Witness: I don't know.

Mr. Lyon: You notice it says—

Mr. Neave: Why don't you reserve that until you cross-examine?

Mr. Lyon: I was trying to get this straight. [699]

It says "1.83 Dry Blast" and then it says "Top 30." Does that indicate that there is more moisture entering the top than entering the bottom?

The Witness: Oh no.

Mr. Neave: Q100. Would that be grains or temperature? A. That would be grains leaving the top.

Q101. Under dry blast?

A. Why sure, under dry blast.

Mr. Lyon: Under "Top" what would be the grains leaving?

The Witness: That is probably a temperature they got somewhere. That is 30 degrees temperature they got somewhere. There is some adjusting done in there in their reading somewhere.

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Mr. Lyon: You don't know what that is?

The Witness: I don't know what it is. I know the one pertains to grains of moisture and the other to temperature because if it was grains of moisture there would be a decimal point between. You would never get 30 in this section.

Mr. Neave: Q102. Very well. And on page 34 you have the same two last columns as you had on page 33, "Dry Blast" and "Top."

A. Well, that pertains, the top, that 27.5 pertains to the same temperature, that 31 on the outlet. There was some adjustment made in their reading somewhere.

Q103. That was the temperature at the top? [700]

A. That was the temperature at the top. And here at the outlet they have got 31 temperature, you see, and then the moisture reading here they had,—that is the outlet moisture reading, that I know.

Q104. The last two columns on pages 35, 36, 37, 38 and 39 have the same headings?

A. They are the same. Now, if you don't mind, I can explain a little on that.

Q105. I wish you would.

A. We have had an electrical instrument there, a temperature instrument, where you can take a good many of your readings from the engine room floor, like, for instance, the air inlet going in at the bottom between the fans and your compartments, and the air leaving the top, and the brine inlet and the brine outlet, and the water inlet and the water outlet, which can be taken right from this instrument.

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Now, this fellow may have went around and taken his readings and then checked them over on the instrument. There was an instrument there where they could take care of practically all the readings with the exception of your dry and wet bulb readings. There they had to go to that point.

Q106. Will you state whether or not it was the regular practice of the temperature man to take the temperature readings of the air every day? A. Oh, yes. [701]

Q107. And these reports are the reports that were made pursuant to that practice? A. Yes,

Q108. Was it any part of your job to keep track of these temperature readings?

A. Well, these temperature readings, no, it was not up to me to keep track of them.

Q109. Did you have any knowledge of them?

A. Oh, yes. In fact, I used to take readings myself but I never entered them on a slip because that was not my duty.

Q110. But you had to consult these temperature readings in the operation of the plant?

A. Sure. I would check them over myself during the day, but these fellows had a regular hourly time, or two hours at a period, where they took their readings and they made their notes, but during any time I could check it, I could take a reading because I had the instrument right before me and check all the apparatus. We could swing from one compartment to another like the water inlet, water outlet, air inlet, air outlet.

Mr. Neave: All right, Mr. Lyon.

(Deposition of Albert Gaide)

Cross Examination

By Mr. Lyon:

XQ111. Mr. Gaide, you say you left the employ of the Illinois Steel Company in 1910 or 1911, is that correct? [702]

A. Somewhere in that neighborhood.

X112. Was that before or after this plant, this dry blast plant that you have testified concerning, was dismantled? A. That was before.

XQ113. You state that you were sent to the Illinois Steel Company by Vilter, I believe; is that correct?

A. Yes, sir.

XQ114. Who is Vilter?

A. They are ice-machine manufacturers.

XQ115. Located where? A. In Milwaukee.

XQ116. And had you been employed by that company before you went to the Illinois Steel Company?

A. Yes, sir.

XQ117. For how long?

A. I started in 1905.

XQ118. In what capacity?

A. I started out in the pipe shop.

XQ119. Was that the only capacity you worked for Vilter?

A. Then I went out on the road for Vilters, setting up machinery.

XQ120. How is that Vilter spelled?

A. V-i-l-t-e-r. We say Vilters on account that there used to be three brothers. [703]

XQ121. What kind of refrigerator machinery did Vilter handle?

A. For ice plants, breweries, packing houses.

(Deposition of Albert Gaide)

XQ122. What kind of refrigeration apparatus?

A. The ammonia type.

XQ123. That is the ammonia expansion type?

A. Ammonia expansion.

XQ124. You had no connection with the Illinois Steel Company prior to the time that Vilter sent you there to work for them, is that correct? A. Correct.

XQ125. Now, for this job for the Illinois Steel Company, you say Vilter supplied the compressor, the engine and the brine coolers, is that correct?

A. Yes, sir and ammonia condensers.

XQ126. And the ammonia condensers? A. Yes.

XQ127. You have testified that this cooling tower arrangement at the Illinois Steel Company was used out there for humidifying and dehumidifying the air. What do you understand those terms to mean?

A. Well, it just dehumidifies the air, is what I mean. They were dehumidifying it.

XQ128. What do you understand that term to mean?

A. Well, it is taking moisture out of a cubic foot of air space. [704]

XQ129. And is it not true that air, that all air has a dew point depending upon its relative humidity at which water will drop out of the air by reducing the temperature below that dew point? A. Yes.

XQ130. And that temperature may be very greatly above or below freezing, is not that true?

A. It can be; yes.

XQ131. Do you understand it was attempt of the Illinois Steel Company to remove all the moisture from the air? A. No, sir.



(Deposition of Albert Gaide)

XQ132. Was there any limit placed that you know of on the amount of moisture that could remain in the air for use in the blast furnaces?

A. Not that I know of.

XQ133. You do not know how much moisture could be removed from the air nor how little, or how much could remain in the air and have the air satisfactory for use in that condition?

A. I don't know just how much could be removed.

XQ134. Was it the practice of the Illinois Steel Company, while you were there, as you say, as assistant in charge of the operation of this dry blast plant to throw their records of these operations away daily?

A. Well, that I don't know either.

XQ135. Did they throw the operating records away?

A. Not the daily. [705]

XQ136. Did they throw any of the actual records away to your knowledge?

A. Well, these here, what I have showed here were throwed away. Probably they accumulated a month or two and then they throwed them away.

XQ137. Probably. Do you know of any instance where they actually threw the records away?

A. I have no special date, no, but these were throwed away when I got them.

XQ138. Do you know, Mr. Gaide, who it was that actually kept these records, that you have here produced as Plaintiff's Exhibit 32, for the company?

A. I don't know who kept them, but a fellow named Amman took the copies of them and put them on the daily sheets.

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XQ139. During any time while you were in the employ of the Illinois Steel Company, do you know of any instance where the records of the actual operations were discarded or thrown away?

A. That I don't know. That is the daily ones I am talking about.

XQ140. You testified on your direct examination concerning the manner of keeping these records, that Nick had told you something about them; is not that true?

A. That is.

XQ141. And who was Nick? [706]

A. Nick Tominac.

XQ142. That is, his correct name is Nicholas Tominac, is that right? A. That is it.

XQ143. When did he tell you about these records?

A. Oh, about five or ten minutes before we come in here.

XQ144. That is today? A. Today.

XQ145. At any other time? A. No, sir.

XQ146. And what did Mr. Tominac tell you about those records?

A. Well, he thought that the night engineer was taking the night records, that is, toward the end. I know when I first started there was record men, 12-hour shifts, and the records were taken by a regular temperature reader. Then he tells me now that he thought the night man was taking the night readings, but at the time I was there they were taking hourly readings by regular temperature men. That was all they had to do.

XQ147. Referring to this record, page 1 of Plaintiff's Exhibit 32, for identification, or rather referring to page

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2 thereof, will you tell me what this extended column of figures is on the right-hand margin of 0.99?

A. That pertains to grains of moisture per cubic foot [707] after it left the top of the coils.

XQ148. I understood you to tell me that was what was meant by the column under "Outlet," the last column inside the bracket?

A. There has some correction been made there which I don't know anything about, but this is their psychrometer reading, this 1.29 is the actual reading they had on top. Now, this here one I don't know what it is.

XQ149. You don't know anything about it?

A. No.

XQ150. This set of figures of 0.99 which appear on the right-hand margin of this page 2 of this exhibit, is that correct? A. Yes.

XQ151. And similarly you don't know what the extended margin set of figures on page 1 of this exhibit is?

A. No.

XQ152. And the same is true of this extended set of figures which are shown on the right-hand margin of all of the pages 3, 4, 5, 6, 7, and 8, of this exhibit, do you?

A. Well, now, wait a minute. I would like to make a correction there. I know what they are but how they arrived at that, I don't know. That is what I mean. It pertains to the grains of moisture leaving the outlet on top. It pertains to this same reading, what there is here. There [708] has same correction been made somewhere. It is the outlet reading. It is either this or that. It has some relation between the two but how they arrived at it, I don't know. I know it is grains of moisture but how

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they determined it I don't know. This (indicating) I know, but how they determined that (indicating), I don't know.

XQ153. The same follows through on page 9, the set of figures reading "1.65" in the last column of figures on that page, is not that true?

A. That is the grains of moisture leaving the top of the air coils.

XQ154. But you don't know how those were arrived at?

A. They are arrived at—you had your moisture readings. You have your humidity first and then you checked up, from your humidity you checked up your grains of moisture in that cubic foot of space. They had a regular table there which after you had swung your psychrometer, and you got your wet and dry bulb readings, then you determined from your chart the grains from the temperature high reading, and the difference in the two temperature readings.

You looked at your humidity and found that humidity. You had another table and you checked up on that the temperature of the air at whichever point you are taking your humidity from, and your humidity reading you checked over and got your grains of moisture per cubic foot of space in the [709] humidity readings, inlet and outlet, but why they made their alterations, that I don't know.

XQ155. My point is, on page 9 you don't know whether this set of figures 1.65, repeated four times for the four operations, were actual readings or whether those were corrected readings?

A. This here where there is not a correction on the side is an actual figure. You don't see that correction on this here.

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XQ156. Did you see the person make these entries here or make these readings?

A. No, I never seen him. I may have seen him but I don't recall.

XQ157. You note that on page 9 there is no heading above those 1.65, is not that true? A. Yes.

XQ158. Can you state definitely whether that is an actual or a corrected reading or a calculated determination of those figures 1.65?

A. I could not state actually unless you figured it out. It could be figured out if you had the tables.

XQ159. The same is true with respect to the extended figures on the right-hand column of figures on page 10, is it not, which figures are 099, 1.01 and 1.02?

A. Yes, sir. [710]

XQ160. And the same is also true with respect to the figures appearing on page 11 in the last column, which figures are uniform figures in that column, 1.03?

A. Yes.

XQ161. And as to this right-hand set of figures on all of these pages 12 and 13 to 32, inclusive, is not that true? A. Yes.

XQ162. Mr. Gaide, did you ever take the temperature of any of these compartments, the air temperature, either wet or dry bulb, after the brine had been withdrawn from the brine pipes or coils and before the water was turned on over the coils? A. No, sir.

XQ163. Did you ever take the temperature of the air in these compartments at the time the brine had been withdrawn from those pipes and both the inlet and outlet of air to those compartments had been closed, and before the water was turned on? A. No, sir.

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XQ164. Did you ever take the temperature of these compartments in which the coils were mounted at any time?

A. Once in a while, but not for the records.

XQ165. Do you know what the temperature of these compartments was at the time that the water was turned on after it had passed over the coils? [711]

The Witness: Can I get that question read?

(The question was read.)

A. No.

XQ166. And similarly I presume you do not know what the temperature of the compartments was after the water had been shut off and the inlet of the air had been opened to the compartments and the system allowed to stand with the air entering through the inlet for a period of approximately thirty minutes, is not that true?

A. No.

XQ167. You don't know what that temperature was either? A. No.

XQ168. You do know, however, that the object of the operation of shutting off the water and allowing the air to enter the compartment through the inlet was to blow out the water from the spray pipes and also off the coils, wasn't it.

A. I don't know. Not that I know of.

XQ169. What is that?

A. No, it was not for that purpose. Now, get this, I want to get this right.

XQ170. Isn't it a fact that this is what was done: The water was turned off, the inlet to that compartment



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was opened which allowed the air which was blown through a common duct to enter that compartment?

A. I don't think it was operated that way. [712]

XQ171. The air was not allowed to enter the compartment?

A. The air was shut off on top.

XQ172. Was that a solid closure?

A. There was some kind of a swing that had—I think there was two openings that went in from the top and went into a big duct, and from there over to the blast furnace.

XQ173. That is right.

A. And this brine was shut off first.

XQ174. That is right, and pumped out?

A. Pumped out. Then he shut off the air and put on the water at the same time.

XQ175. How long a period of time was allowed to elapse between the time that they took out the brine and they turned on the water?

A. Oh, that must have been thirty or forty-five minutes, somewhere in there. I am not just sure what it was.

XQ176. Where was this building located in which these cooling towers were positioned?

A. These cooling coils?

XQ177. Coils?

A. That was east of the brine cooler room.

XQ178. How far distant was it from the blast furnaces themselves?

A. That was quite a ways. I could not tell you that. The blowing engines were a couple of hundred feet away, I [713] imagine. There was a big space of some kind



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there. I have not the slightest idea, to tell the truth. From there it went to the blowing engine. That was quite a distance away.

XQ179. This engine shop, that you said was located adjacent to this refrigeration room, wasn't it?

A. Yes.

XQ180. Was it necessary to employ steam heat to heat that room? A. Oh, no.

XQ181. Did you have any type of heat in that room?

A. No.

XQ182. In fact, being located in a steelplant of that kind, there is enough heat around there so you don't need any heat?

A. That I don't know. That was not the reason. The water was always kept in circulation, or else drained. That was the reason they did not need it.

XQ183. Do you understand what the purpose was of taking the moisture out of the air?

A. Why, the way I understood it, was to cut down the consumption of coke, and they got a better grade of pig-iron out of it.

XQ184. You do know that this operation was discontinued shortly after you left the company, don't you?

A. Yes, sir.

XQ185. And you do know that they continued to make steel, don't you? [714] A. Yes, sir.

XQ186. You don't know whether they utilized any different method of taking the water out of the air after they took this down, what you call the dry blast plant, do you? A. No, I don't.

XQ187. You don't know whether they substituted some other method or not? A. No, I don't.

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XQ188. Have you been back to the Illinois Steel Company since you left there?

A. No, I have not. Oh, come to think of it, I worked about three or four weeks a few years after this plant was out.

XQ189. I see. And do you know whether they were using any other means of taking the moisture out of the air at that time? A. No, I do not.

XQ190. Where were you?

A. I was in the gas engine department for a week or two. I don't remember whether it was a week or two, but I know I was there a while.

XQ191. And as far as your observations went at that time, and your recollection at the present time, they were using no other dehumidifying operation?

A. No.

Mr. Lyon: That is all. [715]

Redirect Examination

By Mr. Neave:

RDQ192. As I understood your testimony on direct, Mr. Gaide, the temperature man would make records on sheets of paper such as are shown in Plaintiff's Exhibit 32, and then that data would be transferred to what you call daily records, is that correct? A. That is it.

RDQ193. And when you told Mr. Lyon that you knew of no instance where the daily records were thrown away, you referred to the sheets to which this data, sheets such as Plaintiff's Exhibit 32, were transferred, is that correct? A. Yes.

Mr. Lyon: That is objected to as leading, grossly so.

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Mr. Neave: RDQ194. How, if at all, did the operating data, such as temperature, moisture content and so forth, such as shown on Plaintiff's Exhibit 32, affect your operation of this plant so far as you personally was concerned?

A. Well, I got the humidity readings or grains of moisture that would be in the air, and that would vary, you know, and then I would have to operate the machines accordingly. I got my readings from these temperature men so I knew what to do with the machines. There were times I would run one machine, or two machines, or four machines. If all four were running and the moisture was going up, we would just speed [716] them up, and that is how we operated the machines, according to the readings that I got acquainted with through the temperature men.

RDQ195. Did you ever operate the plant in the wintertime? A. Oh, yes.

RDQ196. Was it operated continuously?

A. No.

RDQ197. Or intermittently?

A. Intermittently. There would be time, we would probably shut down a week, and then again we would operate them for days. In the wintertime it depends upon the shift of the wind there. You get a lake wind, and the lake is not frozen and it boosts your grains of moisture to around 3 per cubic foot, and we would start the machines; but when the temperature got down so it was around 5, 10 or maybe a little colder, and the wind happened to be from the north or northwest, and the atmosphere was pretty well down, why, we would shut the machines down. So the machines, they were run off and on all winter, but at times they would be shut down a

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little longer than other times. It all depended upon the conditions.

RDQ198. Were you ever in the refrigeration building? A. Oh, often.

RDQ199. Were you ever at the top of the building, toward the top of the coils? [717]

A. Often.

RDQ200. Do you know how the water was turned on for the defrosting process?

Mr. Lyon: Objected to as not redirect examination.

A. Well, they had a main water valve in the main and then a valve at each compartment, and a drain valve between the valve and the compartment valves.

Mr. Neave: RDQ201. Where was water valve in the main?

A. That was toward the brine cooler department, in the corner, off kind of a hallway.

RDQ202. A hallway in the refrigerating building?

A. Yes.

RDQ203. Did you ever know Alfred Mueller, M-u-e-l-l-e-r? A. Yes.

RDQ204. Did he work for the Illinois Steel Company in the dry blast plant when you were there?

A. Oh, yes.

RDQ205. What was his job, do you recall?

A. He was night engineer there.

Mr. Neave: I offer in evidence Plaintiff's Exhibits 32, consisting of page 1 to 39, inclusive.

Mr. Lyon: The offer is objected to on the ground that the records are not shown to have been records of the company, and on the further ground that they are incompetent, irrelevant [718] and immaterial and have not

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been properly proven or identified, and further as mere hearsay.

(The exhibit was so marked.)

Mr. Neave: That is all.

#### Recross Examination

By Mr. Lyon:

RXQ206. You state this drain valve was in the cooler room, and that it was opened, therefore when it was opened it drained the water directly into the cooler room, didn't it?

A. Into the cooler room, somewhere in the basement.

RXQ207. And it drained it directly into the same part of the cooler room in which these brine coils were located, did it?

A. In the sewer, somewhere in the sewer. These sewers were all trapped.

RXQ208. It drained right into the part of the building the coils were in?

A. I don't know. It dropped down in the corner of that refrigerator room.

RXQ209. It dropped right down in the same space that was occupied by the coils, didn't it?

A. Yes.

#### Redirect Examination

By Mr. Neave:

RDQ210. Do you mean it went down through a pipe or through the air? [719]

A. No, no. There was a pipe dropped down somewhere. I don't know how far down it went, and where it hooked onto, that I don't know. I know there was a pipe on the drain valve.

(Deposition of Albert Gaide)

RDQ211. That is, the valve you turned off and on was in the pipe, the valve was in a pipe?

A. Sure.

RDQ212. Then this water was drained off?

A. It went off to a sewer. I don't know whether it led into a sewer or to the floor below, I don't know.

RDQ213. Do you recall whether this pipe went down inside or outside of the refrigerator coils?

A. That I don't know. It was inside the room but whether it jumped out there somewhat, I don't know.

RDQ214. You don't know? A. I don't know.

Mr. Neave: That is all.

(The signature of the witness was waived by stipulation of the parties.)

Mr. Neave: Mr. Lyon, yesterday you asked the witness, Mr. Tominac, to produce the letter to which he referred as having been received by him from Mr. McCarthy. Mr. Tominac stated that he would try to find the letter and give it to Mr. Lietz, who is to be a witness this morning.

Mr. Lietz has handed to me a letter from J. S. McCarthy to Nicholas L. Tominac, dated October 16, 1944, and I am [720] turning it over to Mr. Lyon.

Mr. Lyon: I would like this letter marked for identification as Defendant's Exhibit B.

This letter is dated October 16, 1944, to Nicholas L. Tominac from J. S. McCarthy.

(Said letter was so marked.)

Mr. Neave: The next witness was Herman Leopold Lietz, who was the assistant chief engineer of the Carnegie-Illinois Steel Company, South Works, and had been



(Deposition of Albert Gaide)

with the company since 1909. The drawings of the company are in his custody. He produced the original photograph of which Plaintiff's Exhibit 30 is a photostat.

Mr. Lewis Lyon: There is also a stipulation on page 87 and 88.

Mr. Neave: Yes, there is a stipulation there. There was no cross examination?

Mr. Lewis Lyon: No.

Mr. Neave: There was no cross examination of that witness. There is a stipulation on page 85, which should be put in the record, and the witness produced the original tracing of the drawing, of which Plaintiff's Exhibit 31 is a blueprint, and he identified the blueprint as an exact copy of the tracing.

Mr. Lewis Lyon: And there is a stipulation on page 87 and 88 that should be included in the record. [721]

Mr. Neave: Yes, quite so. There is a stipulation on page 87 and 88 that if George Steudel were called he would testify that the operating engineering records of the dry blast plant in the South Chicago Works are no longer in existence, as they were destroyed four or five years ago.

HERMAN LEOPOLD LIETZ,

called as a witness on behalf of plaintiff, having been first duly sworn, testified as follows:

Direct Examination

By Mr. Neave:

Q1. What is your name?

A. Herman Leopold Lietz.

Q2. And your residence address?

A. 10728 So. Avenue C, Chicago, Illinois.



(Deposition of Herman Leopoul Lietz)

Q3. What is your occupation, Mr. Lietz?

A. Right now I am assistant chief engineer of the South Works, Carnegie-Illinois Steel, at South Chicago.

Q4. How long have you been employed by the Carnegie-Illinois Steel Company or its predecessor, the Illinois Steel Company?

A. Well, I started to work in February, 1909 for the Illinois Steel and I have been there since.

Q5. As assistant chief engineer, are the drawings and engineering records of the Carnegie-Illinois Steel Company, and its predecessor the Illinois Steel Company, in your custody? [722]

A. They are.

Q6. Are you familiar with the various South Chicago plant buildings?

A. Yes. What do you mean, the method of construction?

Q7. No. I mean generally, the layout of the buildings?

A. Yes.

Q8. Will you state whether the Illinois Steel Company ever operated a dry blast plant?

A. Yes, they did.

Q9. Is that plant still in existence?

A. No. There is just one of the buildings that we remodeled, and it is now our metallurgical laboratory.

Q10. Do you know when the other buildings of the dry blast plant were demolished?

A. 1916.

Q11. What was your customary practice about taking pictures of your plant buildings?

A. Well, we generally take pictures when we are constructing any project around the plant, that is, a major project, and if there is any dismantling of a major project, we take pictures of the dismantling.

(Deposition of Herman Leopoul Lietz)

Q12. Have you any pictures of the construction of the dry blast plant?

A. No. They were destroyed when we dismantled the plant. [723]

Q13. I show you a photostat which is marked Plaintiff's Exhibit 30, and ask you whether you can produce from the records in your custody the original photograph from which this photostat was made?

A. Yes, I can.

Q14. Will you please do so?

A. (Witness produces a photograph).

Mr. Lyon: May I see that?

Mr. Neave: Yes.

(Handing photograph to Mr. Lyon.)

Q15. Is Plaintiff's Exhibit 30 a photostat of the photograph you have just handed me? A. This here?

Q16. Yes.

A. Yes, this is the photostat.

Mr. Neave: It is stipulated that the photograph produced by the witness may be placed in the custody of the Notary to have a photograph taken of the photograph produced by the witness. When this has been done, the Notary can then mark the photograph taken in place of that one produced by the witness, as Plaintiff's Exhibit 30-A, which is now offered in evidence in this case.

The Notary will then please return the photograph produced by the witness to Mr. Lietz at the Carnegie-Illinois Steel Company, 3426 E. 89th Street, South Chicago, Illinois, by [724] registered mail.

(The exhibit was so marked.)

(Deposition of Herman Leopoul Lietz)

Q17. Can you produce from the records of your company the original tracing entitled "Dry Blast Plant Refrigerator Building 6" Thawing Out Water Line Illinois Steel Co. South Works 12406"?

A. Yes.

Q18. Will you please do so?

A. (Witness produces a tracing.)

Q19. Would you compare the original tracing with Plaintiff's Exhibit 31 and tell me whether Plaintiff's Exhibit 31 is a photostatic copy reduced in size of that tracing?

A. Yes, I would say it is.

Mr. Neave: I offer in evidence Plaintiff's Exhibit 31.

(The exhibit was so marked.)

Q20. At my request, have you made a search of the records of your company for operating engineering data of the dry blast plant to which reference has been made, such as records of temperatures, humidity, moisture content, et cetera?

A. I made a search in the engineering department. That is the only place that we went to, as our records have all been destroyed with the exception of some of the tracings that are still available.

Q21. Is that the place where such operating engineering records would be likely to be? [725]

A. Operating records would not be in our file.

Q22. Where would they be?

A. If they still have operating records they should be in their blast furnace division.

Q23. Where was that, in South Chicago?

A. South Chicago.

(Deposition of Herman Leopoul Lietz)

Q24. Who is the man in charge there?

A. Mr. George Steudel.

Q25. How do you spell it?

A. S-t-e-u-d-e-l.

Mr. Neave: You may examine, Mr. Lyon.

Mr. Lyon: No cross examination.

Mr. Neave: That is all, Mr. Lietz.

(The signature of the witness was waived by stipulation of the parties.)

Mr. Neave: It is stipulated that if Mr. George Steudel was called as a witness he would testify that the operating engineering records of the dry blast plant in the South Chicago Works are no longer in existence, as they were destroyed four or five years ago.

Mr. Neave: The next witness, your Honor, is Alfred E. Mueller, mentioned by Mr. Tominac, and Mr. Mueller testifies not only to this Chicago prior use, but another prior use at the Northwestern Iron Company at Mayville, Wisconsin, by [726] which company Mr. Mueller was employed from 1909 to 1928. I would like to have the direct examination copied into the record, and I would like to read it.

The Court: To read it, you say?

Mr. Neave: Yes:

The Court: I will give you a rest for a few minutes.

(A short recess was taken.)

The Court: You may proceed.

ALFRED E. MUELLER,

called as a witness on behalf of plaintiff, having been first duly sworn, testified as follows:

Direct Examination

By Mr. O'Hearn, Jr.,

Q1. Will you please state your full name?

A. Alfred E. Mueller.

Q2. And your residence?

A. 9371 River Shore Drive, Niagara Falls, New York.

Q3. Where are you employed, Mr. Mueller?

A. Tonawanda Iron Company in North Tonawanda, New York.

Q4. Were you ever employed by the Illinois Steel Company?

A. I was employed by the Illinois Steel Company in 1908 and 1909, the South Works plant.

Q5. What was your job while you were with the Illinois Steel Company?

A. My first job down there was working for the Vilter [727] Manufacturing Company while we were erecting the dry blast plant there, and when the plant started operating I got an engineer's license and then was hired by the Illinois Steel Company as operating engineer. I ran one shift of the plant opposite to Mr. Gaide under Charles Leinert, Chief Engineer.

Q6. And what buildings made up the dry blast plant at that time?

A. There was only one main building, the compressor, and these other buildings were more or less attached to it. There was a compressor building and the pump room, the brine room, the brine cooler building and the refrigerator building.

(Deposition of Alfred E. Mueller)

Q7. Can you describe the arrangement of the refrigerator building?

A. The refrigerator building was a large tall building with no windows, about—I won't give you the dimensions, I don't believe you are interested in the dimensions, but the inside was divided into seven compartments, and each compartment ran from the basement clear up to the top floor, about sixty feet high, and each compartment had a coil of pipe, 2-inch coil. This coil of pipe was composed of a header 10-pipes wide and then 2-inch pipes 40 feet long, and 102 pipes high.

The Court: Wait just a minute. Forty feet long and how far apart? About 6 inches, it would be, if it was a building of 60 feet. [728]

Mr. Neave: Ten pipes wide.

The Court: Oh, it is 10 pipes wide, 102 pipes high and 40 feet long?

Mr. Neave: Yes, sir.

The Court: All right. And about 60 feet high.

Q8. What was done in this refrigerator building?

A. In this refrigerator building through this pipe coil the refrigerated brine was circulated, the idea was to cool the air which passed over these pipes. The reason was to cool the air so it deposited its moisture, and from there it was piped over to the blast furnace and the Bessemer converters.

The Court: Can I interrupt you a moment? Is there to be any testimony anticipated as to the freezing effect of brine? I suppose brine is their trade name for some kind of a solution?

Mr. Neave: Yes, we will have some testimony explaining the action of various refrigerants. The brine here used



is brine that has been cooled to any degree that you want, and passed through pipes, and then that cools the pipes.

The Court: Well, for the cooling, they just dribble water over it to cool it?

Mr. Neave: There are two different things that must not be confused. One is the use of brine to cool the pipes, and then they defrost with brine.

The Court: I understand that. I am not confused in that. [729] I am talking about the refrigerant now.

Mr. Neave: The refrigerant here is the brine that goes inside the pipes.

The Court: Inside the pipes. Have the witnesses in this deposition testified it went through the coils and over the coils, the brine?

Mr. Neave: No, that is not brine in that. That is ammonia in that system.

The Court: Oh, this is ammonia here, and the brine was down here (indicating).

Mr. Neave: No, in this system, your Honor, no brine was used (indicating model).

The Court: He testified they had ammonia and it blew up the building, and then they put it in with brine.

Mr. Neave: Let me explain it. First of all, in the original system there was ammonia gas, and that was used,—

Mr. Lewis Lyon: And it blew up the building.

Mr. Neave: That was used, and it blew up the building. The next thing that happened was that they used brine in the pipes for refrigerating.

The Court: Yes.

Mr. Neave: Then they also used brine for defrosting for a short period.

The Court: I remember that.



Mr. Neave: Then thereafter— [730]

The Court: They used water.

Mr. Neave: —they used water for defrosting. That is my recollection of it.

The Court: But the only thing I am concerned about now, and the question that is going through my mind—and I don't know, maybe it isn't relevant or material—is the action of different refrigerants passing through a coil or pipe that is 10 pipes wide and 102 pipes high, and which is 40 feet long, what effect that would have. What would that do—how cold would it make it?

Mr. Neave: We can have some testimony on that for your Honor.

The Court: I am not asking for it.

Mr. Neave: I think it would be interesting.

The Court: Well, is it material?

Mr. Neave: No, I don't think it is, because you can make it as cold as you want, as I understand it.

Mr. Lewis Lyon: Or as hot as you want it.

Mr. Neave: Or as hot as you want it. It just depends upon the temperature to which the brine is cooled. But we will have some testimony in order to make that clear.

The Court: This brine entered here, and it went 40 feet 102 times, didn't it?

Mr. Neave: That is right.

The Court: Forty feet by 102. That traveled, then, [731] 4,080 feet. Does brine get cooler the farther it travels?

Mr. Neave: No, it gets warmer.

Mr. Lewis Lyon: It gets warmer.

Mr. Neave: Yes, when it comes out it is at a warmer temperature than when it enters.

The Court: And one of the temperatures it entered—one of the depositions stated that it was 35 degrees when it entered?

Mr. Neave: Thirty-five when it came out.

The Court: Thirty-five when it came out?

Mr. Neave: Yes, that's right.

The Court: What would that freeze?

Mr. Neave: That would be at the bottom, the lower-most pipes. You see, the air comes in at the bottom in these plants and goes up, and the brine comes in at the top in the pipes and goes down, and the cold brine is at the top.

The Court: What makes brine freeze? The pressure on it?

Mr. Lewis Lyon: Brine doesn't freeze.

Mr. Neave: It doesn't freeze. What makes it cold?

The Court: What gives the chilling effect?

Mr. Neave: As I understand it, how they cool it is that the brine is a solution of water and salt, some sort of salt, and that is passed through a pipe, and there is another pipe around that pipe which has ammonia in it, and that ammonia and gas, whatever it forms, cools the brine. [732]

The Court: What makes the ammonia cool the brine?

Mr. Neave: Because the ammonia evaporates into a gas, and that makes it cold. I explained that in my opening statement, your Honor, but we will have same testimony on that so that it will be clear what the action is of refrigerating. It hasn't got anything to do with this particular matter, but I think it is of interest.

The Court: If it hasn't anything to do with it, there is no need of putting it in evidence, but you have to convince me it hasn't anything to do with it.

Mr. Neave: That is right; so we will have some testimony.

The Court: Because you are introducing this testimony on prior art, prior use, and prior sale, and so on, and so forth.

Mr. Neave: That is right.

The Court: This is just a question that arose in my mind, as to how could it would get.

Mr. Neave: Well, you can get your pipes cold by various methods. One is by using ammonia gas, or any other gas.

The Court: So far there isn't any testimony as to the temperature of the brine when it was introduced into either the Pittsburgh plant or the Carnegie plant.

Mr. Neave: Yes, your Honor.

The Court: As to the temperature of the brine?

Mr. Neave: Some of these records in Plaintiff's Exhibit [733] 32, your Honor, have brine temperatures on them.

The Court: I know that.

Mr. Neave: They have brine temperatures. I am looking at one, for instance, of June 16th that shows the brine feed at 9 A. M., and the feed was 21.5 degrees and the return was 39 degrees. That was in the summertime, and the outside temperature was 76. The temperature of the air at the outlet was 30.5. You see, the brine came in cold at the top and the air comes in hot at the bottom, at 76 from the outdoor atmosphere.

The Court: He didn't testify the brine came in at the top.

Mr. Neave: I am not sure whether or not he did, but there is some witness there who does testify. You see, we haven't read all of these depositions.

(Deposition of Alfred E. Mueller)

The Court: All right.

Mr. Lewis Lyon: The material fact in that respect, however, your Honor, is that all of the brine when it was pumped out of the coil, all of the brine when it was all mixed together, was 35 degrees, and that is the testimony of the last witness.

The Court: All right. We will see what happens. I just wanted to let you know what was in my mind.

Mr. Neave: That brine after it is pumped into the top has been cooled.

The Court: You mean it is cooled down to 35 degrees? [734]

Mr. Neave: No, it is 35 as it leaves the pipe. It is cooled—

The Court: Before it goes back into the system?

Mr. Neave: Before it goes back into the system, that is right, your Honor.

Q9. How was the air controlled in passing through this refrigerator building?

A. Well, each compartment down in the basement underneath the coils had two openings where the air entered. These openings were closed with shutters or wooden sliding doors, and then on top of the compartment there were two cast-iron shutter valves that took the air off at the top of the compartments and led it by means of two branch pipes into a main header, 8-foot diameter pipes, that went over to the blowing engines.

Mr. Neave: There, your Honor, you get the point.

The Court: All right.

Mr. Neave: Q10. You testified, Mr. Mueller, that the idea was to remove the moisture from the air, and that was deposited on the pipes, or coils, in the form of frost?

(Deposition of Alfred E. Mueller)

A. It was deposited—Until the lower coils were wet they were not frosted, and then as you went higher up the brine was colder and there the pipes were frosted.

Q11. How was this frost removed from the pipes?

A. Well, after a compartment accumulated a certain [735] amount of frost, we started to defrost it. To do that we pumped the brine out of the coils and sprinkled them with water.

Q12. Where did the water come from?

A. This water that we used for sprinkling was waste water from the ammonia condensers that came off of the top of the compressor building, from the bottom of the ammonia condensers and was piped over to the refrigerator building, and from there it was taken by means of pipes to the compartment which was to be thawed off.

Mr. Neave: Now, you see, your Honor, the ammonia condenser condensed the ammonia which was used to cool the brine.

The Court: There was some place along the line the brine passed through the ammonia and was cooled.

Mr. Neave: Was cooled, that's right.

Q13. Was there any means to drain this system of water pipes?

A. Oh, yes. The pipe coming over from the ammonia condensers before it entered the refrigerator building had a valve there. When this valve was closed, of course, there was no water that went into the refrigerator building. And then the water that had been in there before, that was drained out. We had a drain valve on the other side of this valve as it entered the building, so when you were not defrosting this pipe was drained of water. [736]

(Deposition of Alfred E. Mueller)

Q14. You stated that you alternated with Mr. Gaide in operating this plant. What guided your actions in operating the plant? What records did you have to follow?

A. The chief told us where we were to keep the humidity of the air. The purpose of the plant was to dry the air. He told us where we were to keep the humidity, so many grains per cubic foot. We had a record that they took of all the temperatures on the top of the coils and the bottom, the brine feed and the brine return, and the temperature of the atmosphere, and according to that we ran our compressors, we speeded them up or closed them down.

Q15. Did you ever take this temperature yourself?

A. Oh, yes. I had to take it, not only to check the record man but sometimes the record man was not available or was not there and I had to take it myself.

Q16. What was the temperature of the brine that went through the coils in the refrigerator compartment?

Mr. Lewis Lyon: Objected to as not the best evidence.

The Court: Overruled.

A. The feed ran all the way from, I would say, 15 degrees to around 20 or 24 degrees, and the return, of course, that varied with the load of how many furnaces we had operating and how many Bessemer converters were running. It depended on the cooling load it had to take care of.

Q17. What was the temperature of the air at the top of the [737] coil?

A. The temperature of the air—Maybe the brine, probably I should have given that a little lower because it usually ran a little lower. The temperature of the air ran from 20 to 30 degrees,—34.



(Deposition of Alfred E. Mueller)

Q18. Do you have with you, Mr. Mueller, any record of the temperatures that were taken at the South Works plant?

A. Yes, I have one that is more or less of a synopsis of one day's operation.

Q19. Is this chart in your own handwriting?

A. This is a carbon copy of my own handwriting.

Mr. O'Hearn, Jr.: Q20. Where has this chart been since you made it, Mr. Mueller?

A. I have had this chart ever since I made it. It has always been, so far as I know it has always been in this book here (indicating). I had some other notes, records of the dry blast plant that I kept for my own information, my own amusement, you might say, and I kept them in this book.

Mr. O'Hearn, Jr.: Could we have this chart marked (Plaintiff's Exhibit 33, for identification).

(Said chart was marked for identification.)

Q21. Is there a date on this report, Mr. Mueller?

A. It is dated May 17 to 18, 1908.

Mr. Lyon: Where?

The Witness: May 17 to 18, 1908, ending May 18th, at [738] 6 A. M. It looks like 11, is that what you mean? It is 17. I don't know why it don't show better.

Mr. O'Hearn, Jr.: Q22. How does it happen that this chart shows the temperature for a full 24-hour period?

A. Once every two weeks the operating engineer works 24 hours to let his partner off 24 hours, and that always was on a Saturday to Monday, and this happened to be one day when I was on a 24-hour turn. That is one reason I kept the thing, as a memento of a 24-hour shift. I was on this 24 hours.



(Deposition of Alfred E. Mueller)

Q23. Starting at the left side of the chart, we have the first column which is the "Time" and then we have the second column, "Weather Conditions." Then, we come to the third column headed "Temperature" and a sub-heading "Atmosphere." Will you explain what the figures in that third column represent?

A. The column "Atmosphere Temperature," that shows us the temperature of the outside air as it entered the fan before it entered the refrigerator building. That is the outside temperature.

Q24. The fourth column from the left is headed "Top of Coil." Would you give us what the figures in that column represent?

A. We had two thermometers on top of the coil, one was an ordinary mercury thermometer and the other was a liquid thermometer. Which one of these it was, I don't know but I [739] think this was an ordinary mercury thermometer that was inserted in this 8-foot steel pipe on top of the refrigerator building, and that temperature was read hourly by the record man, and that is reported in this fourth column.

Q25. The next column, the fifth from the left, has a heading: "Psychrometer" and a sub-heading "Inlet" and under that a heading "Dry." Would you tell us what the figures in that column represent?

A. Well, a psychrometer is a combination of two thermometers; one has only an ordinary thermometer with a dry bulb and the other thermometer has a piece of wet muslin around the bulb.

Q26. And what are the figures in that column under the head "Wet"?

(Deposition of Alfred E. Mueller)

A. Those two columns are tied together. To get a psychrometer reading you must have the dry bulb and the wet bulb temperatures because from the difference of those two is how you determine the moisture in the air.

Q27. Then, in the seventh and eighth columns we have the headings "Psychrometer Outlet Dry" and "Wet." Could you tell what the figures under those columns represent?

A. The air that was dried in the refrigerator building, a sample of that air was drawn down through a pipe, back into the inlet of the fan, and on its course down to this fan it ran over two thermometers, one a wet-bulb thermometer and the [740] other a dry bulb. By the difference between these two thermometers we got the moisture in the air after it had gone through the refrigerator building.

Q28. Then, the last two columns on the right of this chart have the headings "Moisture Grains Per Cu. Ft. Inlet" and "Outlet." Can you explain the figures in those last two columns?

A. Yes. From the readings that we took on the wet bulb and the dry bulb on the inlet,—we had a table and that table showed us what the moisture would be in grains per cubic foot corresponding to those two temperatures, and that was reported in the eighth column for the inlet and in the ninth column for the outlet.

Q29. Mr Mueller, down near the bottom of this chart I see in the second column the words "Average Day." Can you tell me what the average temperature at the top of the coil was for that period covered by this chart?

A. Well, the average temperature for the day turn, his average here was 67.666 degrees. That is for the day turn.

(Deposition of Alfred E. Mueller)

Q30. That was atmospheric temperature?

A. That was for the atmospheric temperature, outside temperature.

Q31. What was the temperature at the top of the coils, the average temperature?

A. The average temperature for that day turn was 25.34. [741] It looks like a misplaced decimal point there.

Q32. During the time that you were at the South Works plant, did you ever have any trouble with water freezing in the supply pipes or the spray headers over the coils in the cooling compartment?

A. No. We never had trouble with that.

The Court: Before you get off of this subject here, what was his answer as to the top of the coil? That is taken on the coil itself.

Mr. Lewis Lyon: That is right.

Mr. Neave: No, I believe not; not on the coil itself. It is taken in the air above the coil.

Mr. Lewis Lyon: That is not true.

The Court: Immediately above the coil?

Mr. Neave: No. Your Honor, we will go back to page 97, the answer to question 27:

“A. The air that was dried in the refrigerator building, a sample of that air was drawn down through a pipe, back into the inlet of the fan, and on its course down to this fan it ran over two thermometers, one a wet-bulb thermometer and the other a dry-bulb. By the difference between these two thermometers we got the moisture in the air after it had gone through the refrigerator building.”

The Court: That is at the outlet, the dry and wet reading? [742]

Mr. Lewis Lyon: That is the wet bulb reading.

The Court: That is the temperature of the air?

Mr. Lewis Lyon: That is correct.

Mr. Neave: That is what we are talking about.

The Court: In other words, let us take 7 o'clock in the morning on this day the atmospheric temperature was 63. That was just the outside air on top of the coil?

Mr. Lewis Lyon: That is the coil temperature.

The Court: That is the coil temperature; isn't that right?

Mr. Neave: No, your Honor.

The Court: That is the air?

Mr. Neave: That is the air on top of the coil. There were two different sets of readings.

The Court: I understand he has three sets of readings.

Mr. Neave: Well, temperature readings. One of air, one was the psychrometer reading.

Mr. Lewis Lyon: No, your Honor; that is the coil temperature.

Mr. O'Hearn: No, it is not.

Mr. Neave: If your Honor will look at the chart—

The Court: I have it here.

Mr. Neave: —at the top you will see the word "air" spread across.

The Court: Yes, air. [743]

Mr. Neave: Underneath that is "temperature" "atmosphere" and "top of coil."

The Court: And "Psychrometer Inlet—Outlet, Dry and Wet." Those are all temperature readings.

Mr. Neave: All of the air.

The Court: Then I can't understand this witness' testimony.

Mr. Neave: Let us go back.

The Court: I will explain it. As I understood him to say, he said the temperature at the top was the temperature taken at the blower after the air was cooled.

Mr. Neave: That is right.

The Court: Isn't that right?

Mr. Neave: That is right.

The Court: Then the outlet temperature over here, he says that is the same thing, and dry it was 66 degrees and wet it was 46.5 degrees. So how could he have 46.5 degrees and 23.4 degrees at the same place?

Mr. O'Hearn: That is not at the same place.

Mr. Neave: Let us go back.

The Court: Let me see. He says the inlet temperature is taken by the psychrometer, the wet and dry, where the air comes in at the bottom. Is that right?

Mr. Neave: That is right.

The Court: And the outlet temperature is taken where the [744] air goes out, to correspond, at the top?

Mr. Neave: No, it was taken at a different place. It was taken, as I recall, in a pipe. Let's turn to question 27. The answer is:

"The air that was dried in the refrigerator building, a sample of that air was drawn down through a pipe, back into the inlet of the fan, and on its course down to this fan it ran over two thermometers,"—

The Court: In other words, that is the outlet air.

Mr. Neave: It comes from there and is drawn out.

The Court: It is the outlet air?

Mr. Neave: That is right.

The Court: It is from that that they determine the moisture content?

Mr. Neave: That is right.

The Court: —of the air going into the furnace?

Mr. Neave: That is right.

The Court: So whether they take it back or down, they were satisfied that was the place to take the temperature to accomplish the result of drying the air; is that correct?

Mr. O'Hearn: That is right. It is heated up while it is going down through the pipe.

The Court: But we haven't got that.

Mr. O'Hearn: That is explained in the cross examination.

The Court: All right. Now, wait a minute. This is: [745]

"Q24. The fourth column from the left is headed 'Top of Coil'. Would you give us what the figures in that column represent?

"A. We had two thermometers on top of the coil, one was an ordinary mercury thermometer and the other was a liquid thermometer. Which one of these it was, I don't know but I think this was an ordinary mercury thermometer that was inserted in this 8-foot steel pipe on top of the refrigerator building, and that temperature was read hourly by the record man, and that is reported in this fourth column."

Mr. Neave: That is right.

The Court: In other words, that is the air that went to the furnace.

Mr. Neave: That is correct; from that pipe. That is in an air vent pipe.



(Deposition of Alfred E. Mueller)

The Court: That is the thing that corresponds to the thing across the top here (indicating model)?

Mr. Neave: That is right.

The Court: And yet they determine the moisture content, which is what the whole operation was about, not from that air but from air measured some place, which is 46 degrees, or just twice as much?

Mr. Neave: That was air—

The Court: It sounds to me like somebody was mistaken. [746]

Mr. O'Hearn: No, your Honor. That is correct.

Mr. Neave: I think it will be explained in the testimony later on, as we come to it.

The Court: All right.

Mr. Neave:

Q33. Now, Mr. Mueller, you have testified that you worked at the dry blast plant of the South Works of the Illinois Steel Company until 1909. Where did you go from there?

A. When I quit down at Illinois Steel Company, I got the same sort of a job at the Northwestern Iron Company in Mayville, Wisconsin.

Q34. And you say you left the Illinois Steel Company in 1909?

A. It must have been about August, 1909.

The Court: By the way, this does not show which one of these seven rooms this was, this Exhibit 33, and there is no testimony about that, is there?

Mr. O'Hearn: Any one of them.

The Court: I don't know about that "any one of them." It is an exact record, and it purports to be of some thing.



Mr. Neave: That is right.

The Court: Was this during the defrosting? I suppose the cross examination will take care of that.

Mr. Neave: These were the temperatures taken while the plant was operating, while the units were operating. [747]

The Court: They would not all be the same.

Mr. Neave: Not necessarily.

Mr. O'Hearn: That is why they took the temperature up in the top column. It was the combined result of the six compartments they were operating.

Mr. Neave: You see, defrosting was done in only one at a time, and while it was being defrosted that compartment was shut off, and no air blown through there.

Mr. Lewis Lyon: And no record was taken of it?

Mr. Neave: That is right.

Mr. Lewis Lyon: These records were not taken during defrosting, but at some other time.

Mr. Neave: That is right. There was no record taken while defrosting.

The Court: On the matter of defrosting you are not contending that these were below zero?

Mr. Neave: Not below zero, your Honor.

The Court: Or below freezing?

Mr. Neave: Oh, surely.

The Court: You are contending that these pipes were below freezing?

Mr. Neave: Yes, your Honor, they must have been for this air to have been blown through there.

The Court: When the air was shut off and the refrigerant was taken out of the pipes? [748]

Mr. Neave: Certainly.

Mr. Lewis Lyon: 75 degrees air was blown in?

Mr. O'Hearn: No, it was shut off.

Mr. Neave: What happens, your Honor, is that you have these coils, a mass of coils in a compartment. Now, there has been air blown in those coils and the air comes out at the top at this temperature of 25, or whatever it may have been, below freezing. When you start to defrost those coils are cold. The first thing that is done is that the shutters are closed so that no air can blow through there, so that there is no warming agent coming into that compartment.

Mr. Lewis Lyon: That isn't the testimony.

The Court: Let him finish his statement.

Mr. Neave: That is what I believe the testimony to be. So that there is no air coming into that compartment. Now, those coils are cold. The refrigerant is brine and is taken out of those coils, pumped out. Those coils are covered with ice and frost; the whole room is covered. It is surrounded by other compartments which are operated, and which are cold. Then the water is turned on at the top in that compartment and it is defrosted.

The Court: In four hours?

Mr. Neave: That is right.

The Court: The whole operation is then that the air is opened from the bottom and room temperatures come in? [749]

Mr. Neave: No, sir.

The Court: That is what he testified.

Mr. Lewis Lyon: For one hour, and it dries the chamber.

Mr. Neave: While the defrosting is going on the shutters are all closed, and after the water has been turned off, and then they open the shutters, in order to dry off these pipes, and the brine that comes in is cooled off.

(Deposition of Alfred E. Mueller)

They pump the brine in, and then open the shutters, and it is cooled, and the place is cool.

Mr. Lewis Lyon: But the whole thing is dried before they permit that to operate, and they do that by bringing air in.

Mr. Neave: But while the water is showering down there is no air coming in.

The Court: Except the air in the water.

Mr. Neave: I beg your pardon?

The Court: Except the air in the water.

Mr. Neave: That is right.

Mr. Lewis Lyon: Your Honor will recall the testimony of the last witness that when the brine was pumped out it took 30 minutes, and it was pumped to the storage on the top of the roof, and the brine was 35 degrees when it was pumped out, and that is before the water was ever turned on.

The Court: I suppose we will get around to it. I just thought I would give all of you a chance to get a little [750] relaxation from the boredom of reading.

Mr. Neave: That is right, your Honor.

Q34. And you say you left the Illinois Steel Company in 1909?

A. It must have been about August, 1909.

Q35. And you went directly to Mayville?

A. Directly to Mayville, Wisconsin.

Q36. How are you able to place that date so accurately?

A. I don't remember the exact date, but one thing I base my recollection on, I was married September 9, 1909, I will never forget that, and I was married just about a month after I came up to Mayville.

(Deposition of Alfred E. Mueller)

Q37. What were your jobs while you were working for the Northwestern Iron Company in Mayville?

A. When I started at Mayville, Wisconsin, I was operating engineer. From there I progressed to chief engineer of the dry blast plant, and afterwards chief engineer of the blowing engines, the pump room and everything. Then, I got to be assistant master mechanic, and finally master mechanic.

Q38. And how long did you work for the Northwestern Iron Company?

A. I worked there about nineteen years. Sometime in 1928 I think I quit.

Q39. How did you happen to leave the Northwestern Iron Company in 1928? [751]

A. Well, it really was not the Northwestern Iron Company until then, because afterwards it became the Mayville Iron Company, and then it was sold to the Youngstown Sheet & Tube Company, and they started to dismantle the plant, and when I saw the place was folding up I thought it was time to get out.

Q40. And was the dry blast plant in operation up until the time you left?

A. It was more or less in operation up until the time the plant was torn down. That was in 1928.

Q41. What buildings made up the dry blast plant at Mayville?

A. In Mayville there were, you might say, three buildings, the compressor building and the pump room and the refrigerator room. The Mayville plant as a whole was smaller than the South Chicago plant because it only refrigerated the air for two small blast furnaces.

(Deposition of Alfred E. Mueller)

Q42. Can you describe the arrangement of the refrigerator building?

A. The general arrangement of the refrigerator building was exactly the same as at South Works, except that it was smaller. Instead of having seven compartments it had only four compartments, but the construction of the compartments was identical except the pipes were all shorter. Instead of being forty feet long they were only some twenty feet long. [752]

Q43. Was the air directed through the compartments there in a similar manner?

A. It was directed exactly the same way. The air inlet, the pipe construction and the number of pipes was practically the same if not identically the same as in South Works, and the air was controlled, top and bottom, the same way.

Q44. Was it also necessary to defrost the coils of the Mayville plant?

A. These coils were defrosted in Mayville by means of water, the only difference being that instead of taking the waste water from the ammonia condenser we took water directly out of the pump room well. We had a well that was connected with Rock River.

Q45. Will you describe the system of pipes whereby water was taken from the well and sprayed over the coils in the cooling compartment?

A. In the pump room we had a large well that was probably 10 or 15 feet in diameter. That was connected, as I say, by means of a 36-inch pipe with the river, and in this well we had the suction pipe of a centrifugal pump, and when we wanted to thaw out one of the compartments we started this pump, and that discharged the water into

(Deposition of Alfred E. Mueller)

a header in the pump room, and this header had four branches, each branch having a valve and each valve having a pipe that went into one of these compartments in the refrigerator building, and in the [753] refrigerator building each of these pipes branches into six, I think six branches, and each branch had two 2-inch spray nozzles.

Q45. Was there any way to drain this system of piping?

A. Yes, there was. There were two ways of draining it, either we drained it through the centrifugal pump, and when the pump was shut down the water would automatically run back through the pump, or there was a drain connected above each valve in the header. That drain was always kept open so that in case one of these valves would leak you would not get water into the wrong compartment; and that valve was also used to drain it after the compartment was thawed.

Mr. O'Hearn, Jr.: Q47. Mr. Mueller, could you explain the operation of this pump so that we can understand how water could be drained through the pump?

A. Well, a centrifugal pump has no valves in it. It has a mere rotor like a fan, and while it is running it should fill with water, each of these vanes as it is rotating slings the water outward, and that causes it to go into a pipe and form a pressure in the discharge pipe. But when you take the power off this pump so there is nothing to drive the vanes, the vanes will stop rotating and the water will flow back again into the pump, and that usually causes the pump to run backward if there is any water there.

Q48. When this runs backward, can you hear the rotor? [754]

A. No. It don't make much noise. It is quiet but you can always see it on the pump coupling.



(Deposition of Alfred E. Mueller)

Q49. Can you tell by looking at the motor whether water is draining back through the pump?

A. Yes.

Q50. How often were the coils defrosted?

A. Usually we defrosted one coil every day. That was both in South Works and in Mayville.

Q51. How long did it take?

A. Normally from three to five hours, that is, the compartment was out of use that length of time. The water was actually sprayed on for maybe an hour and a half or two hours depending upon how much frost there was and the temperature of the water, and one thing and another.

Q52. While you were working for the Northwestern Iron Company at Mayville, was it ever part of your regular job to defrost the coils?

A. Well, as operating engineer it was part of my job, that is—

Q53. Can you explain step by step what you actually did in defrosting the coils?

A. When we wanted to defrost a compartment, the first thing I would do, I would go into the refrigerator building, shut off—say I wanted to defrost No. 1 compartment, I would shut off the brine return valve. Then I would open [755] the pump-out valve just ahead of the brine valve. Then I would close the two shutters down in the cellar to shut off the air.

Then I would go upstairs, up on the top floor, and close the rotary air valve. That shuts it off from the blowing engines. Then I would shut off the brine feed valve, then open an air vent valve that allowed air to go into the coils when we were pumping it out.



(Deposition of Alfred E. Mueller)

Then I would go down below and then start the pump-out pump. This was a separate duplex pump that pumped the brine out of the coils. Then after the coils were empty of brine, which took about twenty minutes, then I would go down in the other pump room and start this centrifugal pump and turn the sprays into the No. 1 compartment, and start the water going up through the sprinkler head into the No. 1 compartment.

Then, depending upon my judgment how long it would take, normally about an hour and a half or two hours, I would shut the pump down, allow the water to drain out of the sprinkler heads and allow a few minutes for the water to drip off the coils, then go back into the refrigerator downstairs and close the pump-out valve and open the brine return valve. This would allow the brine to fill the coils again. That would take normally about half an hour to fill the coils again.

Then, I would go up on the top of the refrigerator and [756] there in this vent pipe which allowed the air to enter there was a glass gauge that showed when the brine got up to the top of the coils. Sometimes I would have to wait a few minutes before it would show. When it showed brine in that glass gauge, then I knew the coil was full of brine. When the coil was full of brine then I would open the brine feed valve and allow it to circulate for a few minutes before I would open the air valve, to allow the cold brine to circulate into the pipes. Then I would open the shutter valve on top of the refrigerator and the two sliding doors at the bottom of the refrigerator, and then the compartment would be back in service, completing the thawing off.

(Deposition of Alfred E. Mueller)

Q54. I now show you Plaintiff's Exhibit No. 7, which is labeled "Dry Blast Plant Northwestern Iron Company," and ask you if you can identify it?

A. What was that number you had here?

Q55. It is Plaintiff's Exhibit 7.

A. Yes. This is a drawing of the refrigerator building at the Northwestern Iron Company at Mayville, Wisconsin. It shows the four compartments and the general arrangement of the building.

Q56. Does this drawing also show the spray headers positioned over the coils in one of the compartments?

A. Yes, it does. It shows there were twelve spray headers in each compartment, over each coil. [757]

Q57. And this is depicted in the figure at the left of the drawing in the upper part of the figure?

A. Yes, that is right.

Q58. And does this show a section of the riser which supplied water to these spray headers?

A. It does not.

Q59. Is a section of the riser shown in the left figure on this drawing?

Mr. Lyon: Objected to as already asked and answered.

The Court: Overruled.

A. It shows a short part of it just at the beginning of the riser, or rather the end of the riser. The rest is not on here.

Mr. O'Hearn, Jr.: Q60. Mr. Mueller, I show you Plaintiff's Exhibit 8, also labeled "Dry Blast Plant Northwestern Iron Company," and ask you if you can identify it?

(Deposition of Alfred E. Mueller)

A. This is a plan of the dry blast plant, both the compressor room, the pump room, fan room, the refrigerator and the general pump room, the pump room that supplied all the furnace pumps.

Q61. Does this drawing show the water pipes which you have previously described?

A. It shows the spray pipes in the four compartments of the refrigerator.

Q62. And you are now referring to the upper left-hand [758] figure in the drawing?

A. The upper left-hand corner of the drawing, yes. That shows the refrigerator building and the spray piping over the coils.

Q63. Mr. Mueller, does this drawing show the header in the pump room which you previously testified to?

A. It shows the header up to where the pump would be, but the pump is not shown here.

Q64. Could you take this pen, Mr. Mueller, and by drawing a circle show about where the pump was?

A. Yes, I can. The pump was situated right there (indicating).

The Court: I don't have that before me. I don't know what you are talking about.

Mr. O'Hearn: That is No. 7 back here.

The Court: No. 7 way back here?

Mr. Neave: Yes, sir.

Mr. O'Hearn: 7 or 8, I believe.

The Court: I see.

Mr. Neave: No. 8 has the marking on it.

The Court: Oh, it is the same as 37. Very well. I have 37 here.

(Deposition of Alfred E. Mueller)

Q65. And will you label that "Pump"?

A. This is the pump. The motor was over here (indicating). It discharged into this header there. I am marking the dis- [759] charge pipe from the pump in to this header.

Q66. Will you draw a lead line to the header and label it "Header"?

A. (Witness does as requested.) This is the header.

Q67. Will you please, Mr. Mueller, draw a line to the spot where the valve controlling the water in these lines was?

A. There was a valve in each branch from the header just above this T here. [760]

Mr. Lyon: The valve "just above this T here" must be shown somewhere in section.

The Witness: Yes. The trouble is you see this section ends here.

Mr. O'Hearn, Jr.: Q68. You are now referring to Plaintiff's Exhibit 7 in the left-hand figure?

A. Yes. That pipe came down here (indicating) like this, alongside the refrigerator building on the outside, and then turned over into the pump room. The pump room is not shown here. The pump room was down here (indicating).

Q69. Now, referring again to Plaintiff's Exhibit 8, which does show the pump room, can you show us on one of the risers where the valve was?

A. There was a valve right in here underneath that elbow (indicating). I will show it over here. There was a valve in each of these here, right underneath that elbow (indicating). The same way here, each of these. There was a drain above the valve.

(Deposition of Alfred E. Mueller)

Q70. Will you also draw a line to approximately where the drain was and label that "Drain"?

A. (Witness does as requested.) There was a small drain valve right here. It is kind of hard to draw it there. It is too bad this does not show more of it.

Q71. Was it part of your job at any time while you were at Mayville to take the temperatures of the brine and the [761] air?

A. The operating engineer has to take all his own temperatures in Mayville because it was a smaller plant and he only had an oiler to help him. He had to take all the temperature readings and record them himself. That was my job.

Q72. What was the temperature of the brine in the cooling coils of the Mayville plant?

Mr. Lyon: Objected to as not the best evidence.

The Court: Overruled. If he knows.

A. Well, that depended on the instructions of the furnace superintendent, whatever he wanted the brine. As a rule we carried a lower temperature than we did in South Works. It ran all the way from, I would say, 10 above to 25 above.

Q73. You have just produced same charts, Mr. Mueller. Can you tell us what they are?

A. These charts here—any one of them in particular?

Q74. You can take them up separately.

A. These are engine room reports, the dry blast engine room reports.

Mr. Lyon: Can I see what the witness is referring to?

(Documents handed to Mr. Lyon.)

Mr. O'Hearn, Jr.: Q75. Where did you get those charts, Mr. Mueller?

(Deposition of Alfred E. Mueller)

A. We made two of these reports every day. This is the original, and then we had a carbon copy that was turned [762] in at the office, and these were kept in the dry blast plant for several years, and before I left, just as a matter of my remembrance of an old time I took some of these records along with me because they were of no value to anybody else.

Q76. Are those records in your own handwriting and were figures made by you?

A. On both of these I worked one shift. Now, this is dated October 6, 1910.

Mr. O'Hearn, Jr.: Could we have that one marked Plaintiff's Exhibit 34?

(The exhibit was so marked.)

Q77. You were saying something about that.

A. That one I was on the day shift and all the figures from 7:00 a. m. to and including the 5:00 p. m. readings are my own figures and are temperatures and pressures and revolutions that I myself recorded.

Mr. O'Hearn, Jr.: Referring to the other chart which is dated August 5, 1909, can we have that marked Plaintiff's Exhibit 35, for identification?

(The chart was so marked.)

Q78. Do you recognize the figures on Exhibit 35 as your own?

A. On this one I was on the night shift and all the figures from the 7:00 p. m. to and including the 5:00 a. m. are in my handwriting. [763]

Q79. On Plaintiff's Exhibit 34, for identification, what are the figures represented in the third column from the left?



(Deposition of Alfred E. Mueller)

A. Those were the temperatures taken at the top of the coil, that is, they were the temperature of the air leaving the refrigerator.

Q80. Are all the temperatures shown there shown to be below freezing?

A. They are all several degrees below freezing.

Q81. I show you Plaintiff's Exhibit 35 and ask you what are the figures represented in the third column from the left in that exhibit?

A. Those are also showing the temperature of the air leaving the refrigerator, the top coils of the refrigerator.

Q82. And are all of those temperatures below freezing?

A. All of those temperatures are below freezing several degrees.

Q83. Do you have any other records of temperatures taken at the Mayville, Wisconsin, plant while you were there?

A. Yes, I have several other ones.

Q84. Would you produce them, please?

(A short colloquy was had between the witness and counsel, off the record.)

Mr. Lyon: The witness has produced some papers. May I see what these are?

The Witness: I have a lot more of these. Of course, [764] some of these I don't know who took them. They are not in my handwriting. I don't know anything about them.

Mr. Lyon: What was that statement with reference to these records?

(Discussion off the record between Mr. Lyon and the witness.)



(Deposition of Alfred E. Mueller)

Mr. O'Hearn, Jr.: Could we have these records that Mr. Mueller has just produced marked as Plaintiff's Exhibits 36-A, 36-B, and so forth?

(Said records were marked Plaintiff's Exhibits 36-A to 36-I, inclusive, for identification.)

Q85. Mr. Mueller, will you look through this set of papers which you have just produced and which have been marked Plaintiff's Exhibits 36-A, 36-B, 36-C, and so forth, and looking on each chart at the third column from the left which is "Temperature Top of Coil" see whether all the temperatures recorded on these charts are below freezing?

A. These temperatures were all several degrees below freezing.

Q86. Can you identify the handwriting or the figures on any of these charts as your own?

A. Well, yes, I can some. The one marked 36-E dated August 4, 1909, the night turn on that, the figures from the 7:00 p. m. to 5:00 a. m., in the morning, those are my figures. [765]

Q87. Will you look through the rest of them, Mr. Mueller, and see if there are any more?

A. I don't think any of the rest were my own figures.

Mr. O'Hearn, Jr.: I would like to offer in evidence now Plaintiff's Exhibits 34, 35 and 36-E.

(The exhibits were so marked.)

Q88. During the time you were at the Mayville, Wisconsin, plant, Mr. Mueller, did you ever have any trouble with the water pipes freezing?

A. No, we never had any trouble with them.

Q89. Referring again to Plaintiff's Exhibits 7 and 8, will you state whether or not Plaintiff's Exhibits 7 and 8

(Deposition of Alfred E. Mueller)

show the water piping system for the Mayville plant as it existed when you were employed there?

A. Well, the piping as far as it is shown here was the way we had it in Mayville. Of course, it is not complete. There was more to the piping that is shown, but what is shown is correctly shown.

The Court: On these charts, take that one on June 9th with the funny little doodles drawn in the right-hand corner, column 1, or line 1, 6:00 a. m., atmosphere 55, top of coil 24, psychrometer reading, on that entire page all of the thermometer readings is under the psychrometer readings. All of the temperatures under the psychrometer readings for outlet [766] dry are identical as the top of the coil, and on that one and on the next one down to where somebody apparently changed shifts at 4:00 o'clock p. m. on June 10, at 3:00 p. m. on June 10 the top of the coil reading was 27, the outlet dry was 27 and at 4:00 o'clock the top of the coil was 27 and the outlet dry was 90. Could that be when they were defrosting?

Mr. Lewis Lyon: Probably, your Honor.

Mr. O'Hearn: I can explain that, your Honor.

The Court: Was there anything in the evidence to explain it?

Mr. O'Hearn: Yes, in the cross examination I think there is.

Mr. Neave: I don't know if there was anything about that particular temperature.

Mr. O'Hearn: Not about that particular one.

Mr. Neave: But cross examination does explain these charts.

The Court: All right. Do you want to offer the cross examination?

Of course this doesn't indicate the temperature thawing it out.

Mr. Neave: There is no testimony that these were taken at the time of the thawing.

The Court: All right. But I still cannot understand how a temperature—there is one here—30 degrees top of [767] coil and 106 degrees outlet dry. That is 76 degrees that the air would change in a few feet of travel.

Mr. Neave: I can't understand that, your Honor.

Mr. O'Hearn: I can.

Mr. Neave: Maybe Mr. O'Hearn can explain it.

The Court: Maybe cross examination will explain it.

Mr. Lewis Lyon: I am looking at the cross examination but I don't see any explanation of it in there either.

The Court: Do you offer the cross examination?

Mr. Lewis Lyon: I would like to have the full story in front of the court, yes, your Honor, as far as it is developed. I don't know that there is any need to read it unless your Honor so desires. There are certain points of it as to the temperature of the return brine and the brine that was pumped out that corresponds with the previous witness' testimony.

We will offer it and it can be used for the purpose of the record for argument at any time or in pointing out anything that is material from it, but I certainly want to have the whole story before the court.

The Court: Why don't you go ahead and read it then?

Mr. Lewis Lyon: I will read from page 122:

"A. That return brine would run around 34, 35, 36 degrees.

"XQ113. That was the general practice to keep it 34, 35 [768] or 36 degrees at the return?

"A. About that. Of course, it varied."

There is no testimony in here of any temperature conditions that were taken by any of the witnesses during the time of defrosting except the one temperature.

The Court: Where did you just read from?

Mr. Lewis Lyon: Page 122 at line 3 to line 6.

The reason for leaving the chamber off from further use for a period of two or three hours after that is, as the witness testified, in order to dry out the chamber before even the hot brine was returned to it, that is, the brine at 34, 35 and 36 degrees before the brine circulation valve was opened to permit brine to circulate back to the cooling source.

There was a very pertinent reason for that, which we will show, and that it was essentially to avoid a humid blast of wet air being thrown into one of these furnaces so you would have to dry the chamber out before you ever let the air recirculate.

The Court: All right. The cross examination is in the record.

Mr. Neave: I want to call your Honor's attention to page 135 of the cross examination which stresses the point which you are bringing out.

"XQ193. Have you any figures which show the temperature of the air in that steel collector pipe at the top of the [769] cooling room?

"A. Oh, yes. That whole column of figures—wait a minute. What are we referring to?

"Mr. Neave: Plaintiff's Exhibit 33.

"The Witness: That is in the fourth column.

"Mr. Lyon: XQ194. Those are the temperatures of the air as it actually existed in that tunnel, are they?

"A. In that steel pipe.

(Deposition of Alfred E. Mueller)

"XQ195. In the steel pipe?

"A. Yes.

"XQ196. Where?

"A. Those temperatures were taken way at the end of the last compartment, the fourth compartment—the seventh compartment, way at the end, just as the air left the—wait a minute. How am I going to say that? At the farther end of the refrigerator building, not at the inlet end but at the outlet end of the building.

"XQ197. Those temperatures were taken in the steel pipe, and that steel pipe in that 8-foot pipe after it had collected air from all of the compartments that were operating, is that correct?

"A. That is right; yes."

The Court: What is he talking about, the temperature or psychrometer readings?

Mr. Neave: No, this is the dry bulb reading here. [770]

Mr. O'Hearn: Top of the coil.

Mr. Neave: That is right. This is a regular thermometer that is put in that particular place.

The Court: Let me catch up with you first.

"XQ186. And the discharge temperatures were of the air in the tunnel leaving the cooling building, were they not?

"A. Pardon?

"XQ187. And these outlet temperatures, both wet and dry bulbs, were the temperatures of the air in the tunnel leaving the refrigerator room, were they not?

"A. That was not a tunnel. That was a steel pipe on top of the refrigerator."

(Deposition of Alfred E. Mueller)

That is the same idea.

Mr. Neave: Yes, the air was collected, as I understand it, from all the compartments.

The court:

"A. That was not a tunnel. That was a steel pipe on top of the refrigerator.

"XQ188. Those were the temperatures in that pipe?

"A. In that pipe, yes. That is, these temperatures shown here are not the temperatures of the air taken out of that pipe. In taking the samples of air out of this pipe and bringing it down to where we took our readings it warmed up and we took these temperatures from the warmed-up air.

"XQ189. How far did that air travel? [771]

"A. That traveled, oh, I would say, 150 feet.

"XQ190. And in what size pipe?

"A. 2-inch pipe. 2 or 2½ inch. I am not so sure of that."

I don't understand that.

Mr. Neave: Let me explain it. There is a header at the top that collects the air, a pipe that collects the outlet air, refrigerated air, and some readings are taken there and those are the top of the coil readings.

Then there is a tube that goes down from that about 150 feet, which is a sampling of air, that leads down to the engine room, and these other temperatures are taken from that sampling.

That is my understanding of it.

The Court: It doesn't say it here.

"A. Those temperatures were taken way at the end of the last compartment, the fourth compartment—the



(Deposition of Alfred E. Mueller)

seventh compartment, way at the end, just as the air left the—wait a minute. How am I going to say that? At the farther end of the refrigerator building, not at the inlet end but at the outlet end of the building.

“XQ197. Those temperatures were taken in the steel pipe, and that steel pipe in that 8-foot pipe after it had collected air from all of the compartments that were operating, is that correct?

“A. That is right; yes.” [772]

Mr. Neave: If you go on, your Honor, you will see on the next page it explains this, that is, the 8-foot pipe at the top.

The Court: The witness says in the fourth column. What is the fourth column?

Mr. Neave: That is the top of the coil reading.

The Court: Down on line 11 he says:

“XQ198. At a point beyond the top of the refrigerator room?

“A. Yes.

“XQ199. How far beyond?

“A. Oh, ten feet.

“XQ200. Where was the point of taking, with respect to that temperature, taking the air, at which these psychrometer readings were taken?

“A. Approximately the same place. Inside of this 8-foot diameter pipe we had a funnel probably a foot in diameter, maybe two or three feet long, and this funnel tapered down to a 3-inch pipe, and then led out through the wall of this 8-foot pipe and down back into the fan room. That, as I say, was about 150 or 200 feet of 2-inch pipe which it took to bring it down there.

(Deposition of Alfred E. Mueller)

"XQ201. And did that pipe pass through the outdoors, through which the air was conducted?

"A. It passed outside of the building all the way down. [773]

"XQ202. All the way?

"A. Yes. On a hot summer day when the sun would be beating on there, that temperature went up considerably high. You can see some of the—well, that is not in the record.

"XQ203. How high did it go?

"A. I see some records here of 106 degrees.

"XQ204. Where the wet and dry bulb psychrometer temperatures went up to 106 degrees?"

I guess that is about all there is in there about that. That means that you gentlemen certainly have something to argue about at the appropriate time.

Mr. Neave: Yes.

I just want to add a word there, that the temperatures that have been taken in the 8-foot pipe at the top are the temperatures of the air and the air that was led off through this smaller pipe down 150 feet were for other readings for the moisture content of the air. They had to know what the temperature was in order to get the moisture temperature, and what they were doing it for was for the moisture content. You have to figure that out.

The Court: You mean when that the air is hot there is more moisture?

Mr. Neave: No, it is the other way. I will have to get an expert to tell you about that.

The Court: All right. [774]

(Deposition of Alfred E. Mueller)

Cross Examination

By Mr. Lyon:

XQ90. You have referred, I believe, Mr. Mueller to what you have defined as two operations, one which I believe you have stated to be the South Chicago operation and the other the Mayville operation, is that correct?

A. Yes.

XQ91. The so-called South Chicago operation being the one which you state was conducted at the Illinois Steel Company in South Chicago, Illinois, is that correct?

A. Yes.

XQ92. And the Mayville operation was the operation which you state was conducted at the Northwestern Iron Works, or Iron Company, at Mayville, Wisconsin, is that correct? A. That is correct.

XQ93. Will you state the circumstances and time when you dug up these records concerning both of these operations?

A. As far as "dug up", are you referring to the time Mr. McCarthy called on me?

XQ94. That is right.

A. Well, one Sunday afternoon I happened to be home, the telephone rang and somebody introduced himself as Mr. McCarthy and said he would like to see me. He wanted to know if I had ever worked at South Works. I told him I had back in 1908 and 1909. [775]

XQ95. When was this call?

A. This was shortly before Christmas. I would say around the middle of December.

XQ96. Of what year? A. Of last year, 1944.

So Mr. McCarthy came up to the house and he asked me if I had worked at South Works, and I told him I

(Deposition of Alfred E. Mueller)

did, and he wanted to know what I knew about it. So I says. "Well, I have got a complete description of the plant. I have got it all here in the house."

So I went up and dug around in some of my old records and got out this book here. I had it for my own information. I had written a complete description of the dry blast plant in South Works, South Chicago. He was very interested in it and looked it over, took it along with him and had some of it photostated, and outside of when he returned it to me I got a note, that is all I talked to Mr. McCarthy.

XQ97. Did you discuss at that time also this Mayville operation?           A. Yes, we did.

XQ98. And did you deliver to him at that time these Mayville records?

A. No, I did not. Yes I did, too. Wait a minute. No, I did not.

XQ99. You told him, however, of your information with [776] respect to the Mayville operations at that time?           A. Yes.

XQ100. That was in December of 1944?

A. Yes.

XQ101. How much later was it that you delivered to Mr. McCarthy these sheets that you have here identified with reference to the Mayville operation?

A. Mr. McCarthy, outside of when I showed them to him, when he saw them in my house the middle of December, why, he has not seen them since.

XQ102. But you did show them to him at that time?

A. I did.

(Deposition of Alfred E. Mueller)

XQ103. Did Mr. McCarthy state who he was employed by at the time he called on you?

A. He told me he was representing the General Electric and others. Who the others were, I did not know. I did not know then; I do know some of them now.

XQ104. Have you since learned who he was representing?

A. Outside of General Electric and York, that is all I know.

XQ105. In testifying with respect to the South Chicago operations, you testified on direct examination with respect to the brine coils being approximately 40 feet high and stated that during the operation of these coils the lower portion of the coils were wet. How high were the coils wet during those [777] operations?

A. Sometimes the lower coil showed a slight frost, but most of the time they were wet and the water—

XQ106. How high up were they wet?

A. They would go up sometimes two-thirds of the way up.

XQ107. Two-thirds of the way up?

A. Yes, on a real hot day when the plant was overloaded.

XQ108. How high were they generally wet?

A. Generally they were wet one-third of the way up.

XQ109. One-third of the way up? A. Yes.

XQ110. And by "wet," you mean that water was running off from the coils? A. That is right.

XQ111. And what was this temperature of the brine, what do you state was the temperature of the brine in these coils at the lower portion thereof?

(Deposition of Alfred E. Mueller)

A. Well, that was the return brine, the same as is shown in some of these records. I don't know. That is not available. You are referring to South Works now?

XQ112. Yes.

A. That return brine would run around 34, 35, 36 degrees.

XQ113. That was the general practice to keep it 34, 35 or 36 degrees at the return?

A. About that. Of course, it varied. [778]

XQ114. Well, how much did it vary?

A. Oh, it would probably go up as high as 40.

XQ115. And how low would it go?

A. It would go down to probably 30, or 29 or 28.

XQ116. Not below that?

A. . Very seldom below that.

XQ117. You remember that by observation and actual taking of this temperature, do you?

A. Both by observation and by taking the temperature. You could go underneath there. Most of the time the coils were dripping. Sometimes they were frosted all the way to the bottom, but most of the time they were dripping on the bottom.

XQ118. How many of these coils were there?

A. In each compartment?

XQ119. Yes.

A. Well, each compartment was ten coils wide, ten pipes wire, and 102 pipes high.

XQ120. And how much was the distance between the coils?

A. That sheet shows return brine. They were, I would say, 6-inch sections, 5 or 6 inch.



(Deposition of Alfred E. Mueller)

XQ121. And the size of the pipe?

A. 2-inch pipe.

XQ122. You mean then that they would be spaced on the outside approximately 3 inches? [779]

A. Between pipes.

XQ123. Between pipes?

A. Yes. It was probably a little less than that, it was probably  $2\frac{1}{2}$  inches.

XQ124. And there were how many of these pipes in each section? A. For height?

XQ125. No, in a horizontal plane.

A. In a horizontal plane there were ten.

XQ126. Ten? A. Yes.

XQ127. And how large was this room?

A. They were 8 feet minus the wall. There was about a 4-inch wall and a line from the column. A little over 7 feet.

XQ128. And this was in the South Chicago plant?

A. Yes.

XQ129. And did these brine coils substantially fill this chamber or room within a few inches of the wall?

A. Within 2 inches.

XQ130. On all sides?

A. On all sides, that is, the two vertical sides, not on the ends. On the ends there were walk-ways probably 3 feet wide, and then the ends of the coils, they had a canvas curtain dropping down from floor to floor to keep the air [780] from by-passing through these walk-ways and make the air go through the coils, canvas curtains at the ends of the pipes.

(Deposition of Alfred E. Mueller)

XQ131. Were these canvas curtains left in position when you state the water was poured over these brine coils?

A. Oh, yes. In fact, most of the time those curtains were frozen onto the return bends.

XQ132. All the way?

A. All the way except probably the bottom ones. If the bottom ones were melted or dripping they were not frozen.

XQ133. Now, you have stated the operation, I believe, that you performed in eliminating the frost from these brine coils. Isn't it a fact that the temperature in that compartment rose above freezing due to the period of time which elapsed between the operations of shutting off the different valves, draining the brine out, and performing the other operations before the water was turned on?

A. Oh, no.

XQ134. Did you ever measure that temperature?

A. No, we never measured the temperature.

XQ135. How long was it between the time that the brine circulation was stopped before the water was turned on?

A. Oh, about 40 minutes, something like that, three-quarters of an hour.

XQ136. Well, it was the practice and it did happen that during this time, this three-quarters of an hour, the cooling [781] effect was eliminated from the chamber, and the temperature of that chamber raised, didn't it?

A. Not necessarily. It still had ice-covered coils in there.

(Deposition of Alfred E. Mueller)

XQ137. But still there was nothing to cool it, was there, when you took the brine out?

A. Neither was there anything to warm it.

XQ138. Was it a fact that air could enter that chamber? A. No.

XQ139. It was impossible for any air to get into it?

A. The air was shut off bottom and top. The air in there was stagnant. It was not circulating. It would not hold a vacuum, but there was no circulation of the air.

XQ140. And how airtight was the top valve?

A. Drip tight. They would not leak water. Those were a shutter. Our biggest trouble was freezing tight. They were always too tight. They would freeze shut and we could not move them. We were always kicking about that.

XQ141. Did you ever observe during the period of time that the freezing operation was stopped, or the brine was shut off and the time that the water was turned on, how much higher on the coils the coils began to sweat and were wet before the water was turned on?

A. Those coils—

XQ142. Just answer the question, please. Did you ever [782] make an observation of that? A. No.

XQ143. You have no idea how much higher then in the compartment the coils were wet after you discontinued the brine circulation and before the water was turned on?

A. Those coils would never thaw out. They would not thaw out in six months if you would not put water on them.

XQ144. Just answer the question, please.

A. Will you state it once more?

(Deposition of Alfred E. Mueller)

XQ145. I ask you, then how much higher the pipes would sweat and would be wet after you turned off the brine and the interval of 45 minutes before you turned on the water.

A. Well, I would not know. I never looked at that.

XQ146. Then you turned on this water for the period you state of an hour and a half to two hours to thaw the coils, to run water over the coils, is that correct?

A. Normally.

XQ147. And it took a period of somewhere between an hour and a half and two hours to complete that removal, is that correct?

A. Normally, but there were exceptions.

XQ148. And the total time that was required to complete the operation and put the air-cooling system back into operation you have stated was a period of from three to five hours, is that correct? [783]

A. Yes.

XQ149. And it was most nearly always a period of approximately five hours, was it not?

A. No. Mostly it was around 3½ hours, I would say.

XQ150. Now, after the water had run over the coils for a period of about an hour and a half, wasn't it your practice to shut off the water and to then open the air valves at the bottom of the tunnel?

A. No, I did not.

XQ151. You never did that?

A. I never did that.

XQ152. At the South Chicago plant?

A. I never did it.

(Deposition of Alfred E. Mueller)

XQ153. You never tried to dry the coils before you turned on the brine again?

A. They would not dry. It would be impossible to dry them. All you could expect was to have them drip off. We waited for the water on it to drip off. After all, it had to drip down 45 feet and it took some time.

XQ154. And how long did that operation take?

A. We usually waited about fifteen minutes for that.

XQ155. During that time, were the valves both above and below closed? A. Yes.

XQ156. You never saw them open? [784]

A. I never did.

XQ157. You never saw them open, either of them, during that period of time? A. No.

XQ158. Now, then, you state that the average times were approximately 45 minutes before you turned the water on, an hour and a half to two hours to let the water remain on, a period of 15 minutes to allow the coils to drain? A. Yes.

XQ159. Then a period of half an hour to three-quarters of an hour to get the brine back in the pipes?

A. Yes.

XQ160. And then how long was it before you opened the air valves, inlet and outlet?

XQ161. Another half hour. A. Yes.

XQ162. Is that substantially the same operation that was performed at the Mayville plant?

A. The same operation?

XQ163. The same operation.

A. Yes, except that at Mayville we had to use somewhat colder water.

(Deposition of Alfred E. Mueller)

XQ164. And it took longer?

A. It took a little longer. [785]

XQ165. How much longer?

A. I thawed a compartment for 11 or 12 hours.

XQ166. You thawed a compartment for 11 or 12 hours? A. Eleven or twelve hours.

XQ167. And what was the temperature conditions at that time?

A. That would be when the water in the river would be probably around 40 degrees. That was the water we were using for thawing.

XQ168. What time of year was that operation?

A. That would be November or December, cold weather, or early in the spring.

XQ169. Do you remember any particular time when any such operations required eleven to twelve hours?

A. Well, I remember several times. You see, at the South Works that first winter we only ran a few short times, and I would not know much about it, I have not any records to prove it, but in the Mayville plant we ran that plant very late in the fall and started it early in the spring pretty nearly every year.

XQ170. What do you mean by "very late in the fall"?

A. Well, as I said, the temperature conditions at that time, they would be down to below freezing at night time and maybe as high as 40 above in the daytime.

XQ171. Did you run the plant at night time when it was [786] below freezing? A. Oh, yes.

XQ172. And you ran it 24 hours a day under those conditions? A. Yes.

XQ173. And the temperature of the air coming into the compartment then at some of those times was materially below freezing, is that correct? A. Yes.



(Deposition of Alfred E. Mueller)

XQ174. How low?

A. Well, I would say maybe 25 degrees, not 25 degrees below freezing, but 7 degrees below freezing or 25 degrees above, Fahrenheit.

XQ175. And how much water did you remove from that air?

A. Then we had the moisture down to less than one grain per cubic foot.

XQ176. How much did you remove from it? Didn't it come in at that figure less than one grain per cubic foot?

A. I don't remember the psychrometric table except at one temperature, and that is at 32 degrees. When the air temperature is 32 degrees and it is saturated with moisture it contains 2.11 grains per cubic foot.

XQ177. Did you ever operate any of these compartments where you had 100 outside air humidity?

A. Yes. [787]

XQ178. When?

A. On a real foggy day. When it was not only foggy but when the fog, that is, the air temperature was dropping.

XQ179. Do you remember any time in November or December or early in the spring when you had any such condition? A. Oh, no.

XQ180. As a matter of fact, outside air temperature of the character of which you are just speaking of 25 degrees you don't have any condition of relative humidity which approaches 100 per cent, do you?

A. Just a minute before we got into an argument there. At Mayville we often ran the dry blast plant when we knew we were not taking out any moisture but we were

(Deposition of Alfred E. Mueller)

maintaining constant conditions at the furnaces. In other words, sometimes instead of letting the moisture in the air go up and down we held it uniform.

XQ181. Sometimes you put moisture back in the air?

A. Sometimes we put moisture back in the air. Of course, that was uneconomical and we did not do it very long. As soon as we thought that was going to continue any length of time we shut the plant down.

XQ182. Well, if you did under conditions of 25 degrees outside temperature operate this plant, it was not for the purpose of removing moisture, was it?

A. No. [788]

XQ183. And the actual result would have been in this kind of an operation to put moisture back into the air, wouldn't it?

A. It probably would; yes.

XQ184. Now, in this report, Plaintiff's Exhibit 33, is it not true that these temperatures in the columns under the heading "Outlet" under "Psychrometer," are discharge air temperatures, both wet and dry bulbs? A. Yes.

XQ185. And it was from those temperatures and the use of this chart that you were enabled, together with the inlet temperature under the heading "Psychrometer" to determine the relative drop in humidity of the air cooled, is that not true? A. Yes.

XQ186. And the discharge temperatures were of the air in the tunnel leaving the cooling building, were they not? A. Pardon?

XQ187. And these outlet temperatures, both wet and dry bulbs, were the temperatures of the air in the tunnel leaving the refrigerator room, were they not?

A. That was not a tunnel. That was a steel pipe on top of the refrigerator.

(Deposition of Alfred E. Mueller)

XQ188. Those were the temperatures in that pipe?

A. In that pipe, yes. That is, these temperatures shown here are not the temperatures of the air taken out of [789] that pipe. In taking the samples of air out of this pipe and bringing it down to where we took our readings it warmed up and we took these temperatures from the warmed-up air.

XQ189. How far did that air travel?

A. That traveled, oh, I would say, 150 feet.

XQ190. And in what size pipe?

A. 2-inch pipe. 2 or 2½-inch. I am not too sure of that.

XQ191. Under what velocity?

A. Well, we had a 2-ounce pressure there. Maybe 10 feet per second, something like that.

XQ192. And that temperature was measured at the bottom by passing that air over the wet and dry bulbs of the psychrometer, is that correct?

A. Yes.

XQ193. Have you any figures which show the temperature of the air in that steel collector pipe at the top of the cooling room?

A. Oh, yes. That whole column of figures—wait a minute. What are we referring to?

Mr. Neave: Plaintiff's Exhibit 33.

The Witness: That is in the fourth column.

Mr. Lyon: XQ194. Those are the temperatures of the air as it actually existed in that tunnel, are they?

A. In that steel pipe.

XQ195. In the steel pipe. [790]

A. Yes.

(Deposition of Alfred E. Mueller)

XQ196. Where?

A. Those temperatures were taken way at the end of the last compartment, the fourth compartment—the seventh compartment, way at the end, just as the air left the—wait a minute. How am I going to say that? At the farther end of the refrigerator building, not at the inlet end but at the outlet end of the building.

XQ197. Those temperatures were taken in the steel pipe, and that steel pipe in that 8-foot pipe after it had collected air from all of the compartments that were operating, is that correct? A. That is right; yes.

XQ198. At a point beyond the top of the refrigerator room? A. Yes.

XQ199. How far beyond? A. Oh, ten feet.

XQ200. Where was the point of taking, with respect to that temperature, taking the air, at which these psychrometer readings were taken?

A. Approximately the same place. Inside of this 8-foot diameter pipe we had a funnel probably a foot in diameter, maybe two or three feet long, and this funnel tapered down to a 3-inch pipe, and then led out through the wall of [791] this 8-foot pipe and down back into the fan room. That, as I say, was about 150 or 200 feet of 2-inch pipe which it took to bring it down there.

XQ201. And did that pipe pass through the outdoors, through which the air was conducted?

A. It passed outside of the building all the way down.

XQ202. All the way?

A. Yes. On a hot summer day when the sun would be beating on there, that temperature went up considerably high. You can see some of the—well, that is not in the record.

(Deposition of Alfred E. Mueller)

XQ203. How high did it go?

A. I see some records here of 106 degrees.

XQ204. Where the wet and dry bulb psychrometer temperatures went up to 106 degrees?

A. Where the dry bulb went up to 106 degrees and the other to  $62\frac{1}{2}$ . This is at Northwestern. I have not any figures on South Works.

XQ205. You stated on direct examination that you were given a figure at South Chicago plant of the number of grains of moisture per cubic foot of air which you should operate at. What was that figure?

A. Well, that was never constant. Most of the time it was around 2 grains, 1.8 grains,  $1\frac{1}{2}$  grains.

XQ206. And did it go above 2 grains?

A. Not officially. [792]

XQ207. How often did it go above 2 grains?

A. When the weather was very, very warm and we had a normal load on. You see that South Works plant was designed for two furnaces, and they put on three furnaces, and sometimes four and sometimes five funaces, and the converters. It was designed for, I think, 70,000 cubic feet per minute, and we were at times handling over 140,000 cubic feet per minute, and that so overloaded the plant that it was impossible for us to keep the moisture down below 2 grains. Sometimes it did get above 2 grains of moisture, and as I say not always officially.

XQ208. Now, are the operations that you have stated with respect to the South Chicago plant substantially the same operations as were performed at the Mayville plant?

A. Yes, except that in Mayville the conditions were not quite so severe. We made a better showing. We did better work in Mayville.

(Deposition of Alfred E. Mueller)

XQ209. You mean you did not run into so many of these types of conditions where you could not get down to 2 grains per minute? A. That is right.

XQ210. I mean 2 grains per cubic foot. You did not run so often into that type of conditions?

A. That is right.

XQ211. But other than that the operations were the same? [793] A. Yes.

XQ212. Now, you have referred to Plaintiff's Exhibit 8, a copy of which has been offered as Plaintiff's Exhibit 37. Before this proceeding when did you last see those drawings, that is, both 37 and 8?

A. I don't remember ever having seen them.

XQ213. You don't remember ever seeing it?

A. Not until this morning; no, sir.

XQ214. When did you see it this morning?

A. About 10:00 o'clock.

XQ215. That is, before you were called to the stand?

A. Yes.

XQ216. You never saw it before? A. No.

XQ217. You never made a comparison of anything that is shown by this drawing with either of the plants which you say you operated?

A. Of this drawing, no.

XQ218. As far as this drawing shows the construction, however, you are certain that it is an accurate representation of that construction, are you?

A. I have not found any differences. So far as my recollection goes, everything is just the way it was. I won't swear to the dimensions to the inch or so, but outside of that the arrangement and everything else is correct. [794]



(Deposition of Alfred E. Mueller)

XQ219. The arrangement, direction, travel and so forth of all the pipes is correctly shown, is it?

A. That is right.

Mr. Lyon: That is all.

Mr. O'Hearn, Jr.: That is all, Mr. Mueller.

The Court: How many depositions did we get under our belt today?

Mr. Neave: We finished the depositions of the Chicago and Northwestern and I will now offer Exhibits 7 and 8—

The Court: And Indianapolis.

Mr. Neave: And Indianapolis; yes: I want to offer these exhibits, Nos. 7 and 8, and 30 through 37.

Mr. Lewis Lyon: Your Honor, I would object to the offer of those Exhibits 30 to 37, those pieces of paper that were taken out of the wastepaper basket, as not connected up with anything. Nobody knows who took them, whether they were discarded records or what they were, and there is no evidence at all to connect them with any officials of any company.

The Court: I am afraid there isn't counsel. I was thinking about that. As long as there might be an inference that might be drawn, the inference from the wastebasket might be that it is no good.

Mr. Neave: Let us take up the exhibits individually.

The Court: I think all the others are admissible. [795]

Mr. Lewis Lyon: All the others are admissible except those taken from the wastebasket. I am not objecting to them.

The Court: They have been identified by handwriting, and so forth.

Mr. Neave: Just a minute, your Honor. Let us take up Exhibit 32.

The Court: Exhibit 32 is the only group of exhibits which have not been identified as being definitely the records or coming from the regular records of any company and concerning which the witness testified he practically took them from the wastebasket.

Mr. Neave: Let me speak to that, may I, your Honor? This witness who produced those testified that his duty—may I just read a portion of it on page 44?

“Q27. Mr. Gaide, what were your duties as assistant supervisor of the dry blast plant?

“A. Well, I saw that the readings were taken.

“Q28. Which readings are you referring to?

“A. The temperature readings and the humidity readings. For instance, we had the brine inlet, the brine outlet, the water temperature inlet, the condenser and the water temperature outlet, the atmosphere temperature outside, the air temperature entering the refrigerating rooms — compartments, rather. And we took humidity readings, dry and wet-bulb readings of the air entering the compartments and the air [796] temperature leaving the compartments, and the humidity readings of that air.

“Q29. Whose business was it to take these readings?

“A. We had a regular temperature man.

Q30. A temperature man?

“A. We called him a temperature man.

“Q31. And what did they do with these temperatures after they took them?

"A. That was entered on a big sheet, a daily report sheet after they scribbled it off on scratch paper, what I call it, lined paper.

"Q32. And then they transferred these figures from the scratch paper, as you call it—

"A. To daily report sheets.

"Q33. And where did those daily report sheets go?

"A. Well, off the original they made several blueprint copies that were scattered around through different departments throughout the plant. I don't know just who got them.

"Q34. Did your office get any?

"A. Yes.

"Q35. Were you familiar with these temperature readings?

"A. Well, pretty much so. I should be."

Then I asked him what the temperatures were.

Now it appears that the company records, as stipulated to, are no longer in existence. That has been stipulated to. [797] These records that this man identified were the records that were made by the temperature men.

The Court: I think you are right. Objection overruled. They are admitted.

Mr. Lewis Lyon: Not as to 32. He never testified that he took 32 at all.

The Court: He didn't testify he took 32 but he testified the records of the company were destroyed, that records were kept similar to these that were passed around, and he saw them, and he recognized them, he said they were being thrown away and he saved them. It goes to the weight of the evidence rather than its admissibility; secondary evidence.

(The documents referred to were received in evidence and marked Plaintiff's Exhibit 7, 8, 30, 31, 32, 33, 34, 35, 36 and 37 respectively in evidence.)

[Note: Plaintiff's Exhibits Nos. 7, 30 to 37 will be found in the Book of Exhibits at pages 1125, 1152 to 1205.]

The Court: I still would like to get straightened out in my mind this psychrometer reading. Where is the inlet thermometer posted? Is there any evidence on that?

Mr. Lyon: No.

Mr. Neave: First of all, which operation are you talking about?

The Court: Under "psychrometer" it says "inlet dry-wet," "outlet, dry-wet"—all those are temperature readings. Where were the wet and dry thermometers that took those readings? Is there any evidence on that? [798]

Mr. Neave: I believe there is but I don't know which exhibit you are looking at, your Honor.

The Court: 32, 33, 34, 35, 36—all of them have that same heading. And this witness—you read from page 135—he described how the air was taken from the middle or some place in the big 8-foot tunnel through a pipe down into the boiler room, but no one said where the thermometer is put.

Mr. Neave: I think that with respect to Mayville, which is not Exhibit 32 but it is the other one, with respect to Mayville the temperature of the outgoing air of the top of the coil, the cold air, was in this 8-foot pipe, and the thermometer was placed in that 8-foot pipe. That is the temperature reading in the column that says "top of coil."

The Court: That is your position?

Mr. Neave: That is our position from the testimony.

The Court: What I want to get at is where is there any evidence—I am a column ahead of you. I am up to No. 5 and you are still back on No. 4. Under 5 and 6—do you have the exhibit there?

Mr. Neave: Exhibit 33?

The Court: Yes, 33 is a good example. The form is all the same. It says “air psychrometer.” Now “psychrometer” is divided into four columns. Do you have that?

Mr. Neave: Yes, your Honor.

The Court: And subdivided into two columns which in [799] turn are divided in one, “dry-wet, dry-wet.”

Now where is the testimony about where the thermometer was placed, the wet and dry thermometer, on the inlet?

Mr. Neave: On the inlet side? I will see if I can find out.

The Court: You do not need to look for it now. That might be something you could supply over the weekend.

Also where is the testimony that says where the thermometer was on the outlet dry and wet? I do not mean where the air went, but where was the thermometer?

Mr. Neave: We will find that and give it to you also.

Mr. O'Hearn: That is on page 97, your Honor.

The Court: Let me see it.

(The document referred to was passed to the court.)

The Court: It says it ran over two thermometers, that it was dried in the refrigerating building and a sample of that air was drawn down through a pipe, back into the inlet of the fan, and on its course down to this fan it ran

over two thermometers. Now if it was at the end or the beginning, that would make a difference because that witness has testified that the temperature outside in July was 106.

Mr. Neave: We will get that testimony for you.

The Court: All right. I guess we will have to recess until Tuesday morning at 10:00 o'clock.

Mr. Lewis Lyon: Your Honor asked one question about Mr. [800] Payne. I have ascertained it. I can bring Mr. Payne back from Santa Rosa, if your Honor asks us to do it.

The Court: I do not think it would be necessary to bring him down all the way from Santa Rosa. You know the question I had in mind, and it may be that you can ask him, or counsel can telephone him and ask him, what he would testify to if he were brought back.

Mr. Lewis Lyon: What was the question?

The Court: How long it took manually to clean out by the chipping or chopping method, whatever method they used in the other storerooms, that were the same size as the room in which he installed the Recold system.

Mr. Lewis Lyon: I will ask him.

The Court: Will that be agreeable?

Mr. Neave: That is entirely agreeable to me.

Mr. Lewis Lyon: I will do that.

The Court: Very well.

(Whereupon, at 4:40 o'clock p. m., an adjournment was taken until 10:00 o'clock a. m., Tuesday, September 24, 1946.) [801]



Los Angeles, California, September 24, 1946, 10:00 o'clock A. M.

The Court: Ex parte?

The Clerk: No ex parte, your Honor.

(Interruption for other court matters.)

The Clerk: York Corporation v. Refrigeration Engineering, Inc., for further trial.

Mr. Lewis Lyon: Your Honor, I have communicated by telephone with Mr. James R. Payne, the witness who was on the stand in reference to the Haslett Warehouse job. In answer to the court's question as to how long it took manually to clean out by the chipping or chopping method, whatever method they used in the other store-rooms, that were the same size as the room in which he installed the Recold system.

The Court: You are now reading—

Mr. Lewis Lyon: From your statement.

The Court: —from my statement of last Friday evening?

Mr. Lewis Lyon: Yes; on page 801 of the record.

In answer to that question, Mr. Payne stated to me that the time that it would take would be 144 man hours or, stated another way, two men working three shifts a day for three days.

The Court: Do you stipulate that if Mr. Payne were recalled to the witness stand and asked that question he would so testify? [806]

Mr. Neave: Yes, your Honor.

The Court: Very well. That is 144 man hours or two men working three shifts for three days?

Mr. Lewis Lyon: Yes.

The Court: What page were you reading from?

Mr. Lewis Lyon: 801, your Honor; line 9.

The Court: Very well.

Mr. O'Hearn: Your Honor asked some questions last Friday I believe about the temperature charts that were in evidence in the Chicago depositions, and I would like to point out some places in the record that I think clear up those questions that you asked.

The Court: Very well.

Mr. O'Hearn: First in regard to the inlet air temperature or atmospheric temperature, Tominac said—and I am going to refer, your Honor, to the record pages since the deposition has now been copied into the record.

The Court: Yes.

Mr. O'Hearn: Page 666, starting at line 19. This is not in relation to any exhibit, your Honor, because none of the temperature charts had gone in at this time, but this is generally in relation to the air temperature.

"Q. And can you point out where those readings were taken?

"A. Inlet air temperature was taken down by the air [807] going into the compartment by shutters in the tunnel, while the air was going into the compartment, the inlet air, and the outlet temperature was taken on the top floor." [808]

Then Gaide, the second witness in reference to the first page of Exhibit 32, which was that list of 39 pages of temperature charts, stated at page 693—

The Court: Let me see. Now, he said the inlet temperature was taken at the shutters going into the tunnel and the outlet temperature was taken on the top floor.

Mr. O'Hearn: Yes, your Honor. I was going to come to those outlet temperatures separately.

The Court: Oh, very well.

Mr. O'Hearn: Then in reference to the first page of Exhibit 32, the witness Gaide said at page 693, beginning at line 17, in answer to a question, and this is at line 9:

"Q. Now, what do the entries in the column marked 'Temperature Atmosphere' refer to?"

"A. That is the outside air."

And another answer:

"A. That was the outside temperature."

"Q. Of the air?"

"A. Of the air."

Then in reference to Exhibit 33, which was the one page of temperatures that the witness Mueller presented, he said at page 739 of the record, starting at line 10.

"Q. Starting at the left side of the chart, we have the first column which is the 'Time' and then we have the second column, 'Weather Conditions.' Then, [809] we come to the third column headed 'Temperature' and the sub-heading 'Atmosphere.' Will you explain what the figures in that third column represent?"

"A. The column 'Atmosphere Temperature,' that shows us the temperature of the outside air as it entered the fan before it entered the refrigerator building. That is the outside temperature."

Then, your Honor, in reference to the temperatures top of coils, or the outlet temperatures from the compartment, the witness Tominac said at page 666, line 23, which was the part that your Honor read, in finishing up that answer before:

"A. \* \* \* and the outlet temperature was taken on the top floor.

"Q. Where on the top floor?

"A. Right in each individual compartment.

"Q. Where in each individual compartment?

"A. Right where they come in. There was a door to each compartment.

"Q. You mean a door leading into each compartment?

"A. Yes.

"Q. And that is where the temperature was taken?

"A. Yes, sir.

"Q. Was the temperature taken at any other place?

"A. Well, we would take it once in a while down there at the first floor,—the second floor, but most [810] of the time the outlet temperature was taken right on the top, right above the coils.

"Q. Taken above the coils?

"A. Above the coils because your outlet was above the coils.

"Q. How far above the coils?

"A. About six feet above the coils.

"Q. Above the coils?

"A. Above the coils."

The Court: Let me see if I can understand the general situation here. Where did the witness testify they got into these rooms (indicating model), from this side?

Mr. O'Hearn: Yes, your Honor.

The Court: They came in this way?

Mr. O'Hearn: They came in this way, and there were doors here (indicating), and platforms.

The Court: And platforms. So this would be the top floor, and there was a door going into each one of these?

Mr. O'Hearn: That's right, from a passageway.

The Court: From a passageway. Therefore, this outlet temperature was taken here (indicating).

Mr. O'Hearn: From the top floor, above the coils.

The Court: And the inlet temperature was taken at the bottom?

Mr. O'Hearn: That's right, your Honor; the outside air [811] temperature or inlet.

The Court: There are three temperatures. There is the outside air temperature, which was taken in the tunnel of the other building before it came in.

Mr. O'Hearn: The fan was right beside it.

The Court: There was a little building here, and a fan there, and the outside temperature was taken there?

Mr. O'Hearn: Yes.

The Court: It went through the fan and was taken there, the inlet temperature?

Mr. O'Hearn: I think those are the same temperatures. The fan was just at the entrance to the tunnel leading into the compartments.

The Court: He said these were taken at the shutters leading into the tunnel.

Mr. O'Hearn: You see, there was a fan and the shutters into the building, leading into the tunnel below the building.

The Court: All right. In other words, the inlet temperature was taken before it got into these chambers?

Mr. O'Hearn: That is right.

The Court: And the outlet was taken at the upper part of the chamber?

Mr. O'Hearn: Right above the coils.

The Court: Right above the coils.

Mr. O'Hearn: In fact, I believe the testimony shows they [812] occasionally walked upon the top of the coils. The witness Harkins stated they went above the coils to take the temperature.

The Court: All right.

Mr. O'Hearn: Then the witness Gaide said, in reference to the first page of Exhibit 32, at page 693, line 20:

"Q. And in the second column is the heading 'Top of Coil.' What do the entries under that column mean?

"A. That was the temperature of the air about to leave the dry blast plant refrigerating coils.

"Q. Where was that temperature taken?

"A. On top of the coils."

Then the witness Mueller, in reference to his one-page exhibit, Exhibit No. 33, said at page 739, starting at line 20:

"Q. The fourth column from the left is headed 'Top of Coil.' Would you give us what the figures in that column represent?

"A. We had two thermometers on top of the coil, one was an ordinary mercury thermometer and the other was a liquid thermometer. Which one of these it was, I don't know, but I think this was an ordinary mercury thermometer that was inserted in this 8-foot steel pipe on top of the refrigerator building, and that temperature was read hourly by the record man, and that is reported [813] in the fourth column."

The Court: That does not seem to jibe with the other witness.

Mr. Lewis Lyon: No.



Mr. O'Hearn: Well, your Honor, I believe they mean by the 8-foot pipe this tube up here (indicating).

The Court: Yes.

Mr. O'Hearn: Now, the air right above the coils would be, as I conceive it, the same as the temperature in that 8-foot pipe, whether the temperature was taken 6 feet or 10 feet above.

The Court: Let me see the exhibit. Have you got it? Here it is, right here. Exhibit No. 33, wasn't it?

Mr. O'Hearn: Yes, your Honor, that is this one.

The Court: Yes.

Mr. O'Hearn: In the fourth column.

The Court: All right.

Mr. O'Hearn: In reference to Exhibit No. 34, which was one of the temperature charts that Mueller presented from Mayville,—

The Court: From Mayville, yes.

Mr. O'Hearn: Mueller said at page 764, starting at line 1:

"Q. On Plaintiff's Exhibit 34, for identification, what are the figures represented in the third column from the left? [814]

"A. Those were the temperatures taken at the top of the coil, that is, they were the temperature of the air leaving the refrigerator.

"Q. Are all the temperatures shown there shown to be below freezing?

"A. They are all several degrees below freezing."

Then continuing right on in reference to Exhibit No. 35, which is another temperature chart from Mayville.

"Q. I show you Plaintiff's Exhibit 35, and ask you what are the figures represented in the third column from the left in that exhibit.

“A. Those are also showing the temperature of the air leaving the refrigerator, the top coils of the refrigerator.

“Q. And are all of those temperatures below freezing?

“A. All of those temperatures are below freezing several degrees.” [815]

The Court: If I understand this correctly, then the top of coil as distinguished from the outlet, the coil is here and the outlet is here (indicating)?

Mr. O’Hearn: You mean outlet dry and outlet wet?

The Court: Yes, outlet dry-wet.

Mr. O’Hearn: I was just about to go to that outlet wet, and dry psychrometer readings, your Honor.

Plaintiff will show by further testimony that the number of grains of moisture per cubic foot, or the humidity readings, are determined by taking readings on a psychrometer and a psychrometer is an instrument which has two mercury thermometers, one an ordinary thermometer and the other with a piece of wet muslin wrapped around it. In order to get a proper reading there must be a known velocity of air passing over the thermometer. There are two ways of doing this, either you tie them on the end of a piece of string and you swing them in the air or you can take the two thermometers and you can place them in a pipe in which air is rushing by. Either way gives you the same result.

We also will show by further testimony that it is the difference between the two temperatures that is the important thing rather than the temperature at which the air was taken. In other words, if you have air at a certain temperature and then raise the temperature of that air you have not added to the moisture content of that air in any way. [816]

In other words, it will give you the same result by reference to a psychrometer table whether the temperature of the air was down around 30 or whether the temperature was up around 80, so long as both wet and dry temperatures were taken at the same time.

The Court: That is what they were concerned with, was the moisture content?

Mr. O'Hearn: That is right.

The Court: You are not here concerned with that?

Mr. O'Hearn: No, your Honor; we are not concerned with it.

The Court: We are concerned with the temperature only?

Mr. O'Hearn: The temperature only. But I think the question came up, your Honor, because you thought that the dry outlet temperature should correspond to the top of the coil temperature. If the dry bulb temperature were taken at the outlet, in other words, above the coil, then—

The Court: I think I understand where the top of coil is now. The top of coil is in here (indicating).

Mr. O'Hearn: That is right.

The Court: Whereas the outlet temperature was in here (indicating)?

Mr. O'Hearn: Yes.

The Court: It is in two different places. I understood the testimony to be, when we were discussing it the other [817] day, that the thermometers in two different places read the same.

Mr. O'Hearn: Yes, your Honor.

The Court: And it doesn't, according to this testimony now.

Mr. O'Hearn: The outlet dry temperature, although we noticed the dry went up as high as 106, and—

The Court: Where was that taken now?

Mr. O'Hearn: That was taken in that tube, that 8-foot pipe over the top of the coils. There was a funnel and from the funnel a 2-inch pipe extended outside the 8-foot pipe.

The Court: Where was the thermometer?

Mr. O'Hearn: Down in the engine room.

The Court: Where is the testimony that shows that?

Mr. O'Hearn: The testimony of Mr. Mueller at page 740, your Honor, starting at line 19.

"Q. Then, in the seventh and eighth columns we have the headings 'Psychrometer Outlet Dry' and 'Wet'. Could you tell what the figures under those columns represent?

"A. The air that was dried in the refrigerator building, a sample of that air was drawn down through a pipe, back into the inlet of the fan, and on its course down to this fan it ran over two thermometers, one a wet-bulb thermometer and the other a dry-bulb. By the difference between these two thermometers we got the moisture in the air after it had gone [818] through the refrigerator building."

I was in error, your Honor, in stating it was in the engine room. It is in the fan room that the two-inch pipe led.

The Court: But we still don't know where the thermometer was. He says on its course down. Now that might have been any place.

Mr. O'Hearn: It doesn't matter where it was, your Honor. It could have been in any part of that pipe as long as both thermometers were at the same place in that pipe.

The Court: All right.

Mr. O'Hearn: It could have been up at the top.

The Court: What I am trying to find out is what the temperature was in this thing here that came out (indicating).

Mr. Neave: That is the top of the coil temperature.

Mr. O'Hearn: That is the top of the coil temperature.

The Court: But it was 6 feet from here up to there (indicating).

Mr. Neave: Yes.

The Court: All right.

Mr. O'Hearn: Your Honor also asked a question about how the brine was cooled in order to use it as a refrigerant.

The Court: I think that is clear.

Mr. O'Hearn: Is that clear?

The Court: Yes. [819]

Mr. O'Hearn: All right.

The next depositions we come to, your Honor, are the other depositions that were taken at Elmira, New York. There were four witnesses, your Honor, George A. Per-sonius, who was the photographer, Ralph Van Patten, who installed the two units, Louis V. Smith, who was superintendent of the plant, and W. C. Fuller, who was in charge of the maintenance of the plant.

I would like to offer at this time the direct and redirect testimonies of all four of those witnesses, but I don't think it is necessary to read them into the record now. I would like to summarize them for your Honor.

In July 1935 in Elmira, New York, the Swift Company opened a new plant, and in that plant there were two cooling rooms, one known as the sausage room and one known as the pickle room.

The sausage room was kept at approximately the temperature of 40 degrees and the pickle room was kept at approximately a temperature of 33 to 36 degrees.

The testimony shows, however, that occasionally over weekends both of these units went down below freezing at a time when people were not coming in and out of the room, and this happened particularly in the pickle room, which was the lower of the two temperatures.

To understand the two units, your Honor, there is a [820] schematic drawing, which was marked Exhibit 45, which was identified by both Smith and Fuller as correctly showing the installations. Both units were almost identical, your Honor, except that they were operated in a slightly different way.

Looking at the lower figure on Exhibit 45, it shows the unit with the coils, finned coils, and a spray header which was a 2-inch pipe with small holes drilled in the bottom. Just outside the unit there is on the supply conduit a stop-and-waste valve of the screw cap drain type. That, however, was within the refrigerated space.

Outside the refrigerated space on the supply conduit in both cases there is an ordinary standard valve. The only difference in the operation of the two units was that in the pickle room, where the temperatures were lower, the stop-and-waste valve just outside the unit was always left open, both the valve and the waste feature of the valve.

In other words, the little screw cap drain was always left open. The water was controlled entirely from outside the room. In order to defrost the valve outside the room was opened and water spurted over the coils as shown in the photograph, Exhibit 40, which shows the coils and the spray header with the water spurting out.

After the water had removed the frost from the coils, the control valve outside the room was turned off and by means of the little vent or screw cap drain the supply conduit [821] was vented and the water drained out of the spray header.



In the sausage room, which is shown on Plaintiff's Exhibit 42 with the spray header in operation, it was operated by the control valve just outside the unit. A picture of that valve is shown in Plaintiff's Exhibit 41, a photograph.

When the frost had been removed from the coils the valve was shut off and the screw cap drain, which is shown hanging down below the valve was opened, thus venting the line to the atmosphere and allowing the water which was in the pipe and spray header to drain out.

At this time I also want to offer the Exhibits Nos. 38 through 45 that went with these depositions.

The Clerk: May I have the names of those depositions? Do we have them on file?

Mr. O'Hearn: Yes, I believe so.

The Clerk: Don't bother then.

The Court: The names again were?

Mr. O'Hearn: Louis V. Smith, who was the plant manager, and then there was W. C. Fuller, who was the maintenance man, and there was Ralph Van Patten, who was the plumber who installed both units, and then George A. Personius, who was the photographer that took those photographs.

The Clerk: Yes, I have it.

The Court: You offer in evidence all exhibits, 38 through 45? [822]

Mr. O'Hearn: Yes, your Honor.

The Court: What is this telegram here, Exhibit 44?

Mr. O'Hearn: I think that was put in for two reasons, one to prove the date and also to prove that it was a water defrosting unit.

The Court: All right. You offer them in evidence?

Mr. O'Hearn: Yes, your Honor.

The Court: Any objection?

Mr. Lewis Lyon: No objection.

The Court: Admitted.

(The documents referred to were received in evidence and marked Plaintiff's Exhibits Nos. 38 to 45 inclusive.)

[Note: Plaintiff's Exhibits Nos. 38 to 45 will be found in the Book of Exhibits at pages 1206 to 1214.]

Mr. Lewis Lyon: I will offer the cross examination and recross examination of the respective witnesses who were cross examined, including Louis V. Smith, W. C. Fuller; Louis V. Smith was recalled and recrossed, as well as the cross and recross of the witness Ralph Van Patten.

There are several observations which I believe I would like to make at this time. First, as stated by Mr. O'Hearn, the testimony of the witnesses that both of these rooms were above freezing rooms. They were so operated.

Another very important factor on cross examination shows that in the same Swift plant they had a freezing room which they didn't use this system of defrosting in, but they used [823] the old pipe system and had to take all the meat out of the freezing room and defrost it by other means each time they were required to defrost.

The Court: That is a below freezing room?

Mr. Lewis Lyon: It was right next door to this room. They didn't use water defrosting in that room but they used an older system which required them to take all the meat out of the room and defrost, let the temperature come up, and put the meat back.

Further than that, there is no testimony here of any of these witnesses as to the condition of the so-called de-

frosting rooms or apparatus at any time except at the time the testimony was taken. There is no witness that testifies that condition there was at the time of installation. It is certainly immaterial as far as this case is concerned what the condition of those particular installations was in February of 1945.

The Court: What does the testimony show as to how they defrosted the third room?

Mr. Lewis Lyon: The cross examination of Mr. Smith, page 30. I will read that, your Honor.

The testimony of that is this way, reading from page 29:

"Q. Mr. Smith, in this same plant you have a below zero freezing room, do you not?"

The Court: That is at the bottom of page 28? [824]

Mr. Lewis Lyon: Yes.

"Q. Mr. Smith, in this same plant you have a below zero freezing room, do you not?"

"A. Yes.

"Q. How could it be kept?"

"A. That depends on what product we have. That is not under my supervision and I don't have any occasion to follow the temperature of that. That is handled by whoever is storing the produce in the house and I can't say accurately what the temperature is at any time.

"Q. You do know it is kept below ten degrees below zero \* \* \* you do know that that room is kept below ten degrees below zero at many times?"

"A. I don't know that.

"Q. You do know that it is kept materially below 30 degrees Fahrenheit, do you not?"

"A. Yes.

“Q. There is a refrigerating coil in that room, too, isn’t there?

“A. Yes.

“Q. It is a fact that meat is stored in that room under these various conditions and that the pipes there do frost up and that in order to defrost those pipes the meat is taken from the room, the pipes are sprayed with water by a hose, allowing the temperature to rise, and before any meat is put [825] back in the room the temperature is reduced. Is that true?

“A. Yes.”

Referring also to the cross examination of Mr. Van Patten and the other witnesses, it shows that in these rooms the pipe inside the unit exploded because it wasn’t properly operated at some time.

The Court: Where is that?

Mr. Lewis Lyon: On cross examination of one of the witnesses it was brought out. I think it was in the cross examination of Mr. Smith again.

Mr. O’Hearn: The direct examination of Fuller, page 41.

Mr. Lewis Lyon: He stated that the pipe had exploded because it had gone down below freezing and the pipe had exploded and when that explosion took place nobody knows. Nobody could testify to that.

The Court: Where are you reading from? Page 41?

Mr. Lewis Lyon: That is on page 41, your Honor. The question was:

“Q. I notice in Plaintiff’s Exhibit 40, apparently a considerable spray of water is shown at the lower left-hand corner of that picture. Can you explain what that is?

"A. We have a short break in the pipe there, approximately one inch long."

That opening was caused by the pipe at some time splitting because it was freezing. Now when that split occurred [826] nobody testified about, but the material point that I want to make there comes in Ralph Van Patten's cross examination, or recross examination and redirect examination, with reference to the so-called stop-and-waste valve that was supposed to have been put in this installation at some time or other.

Mr. Van Patten was the only person who testified who had any knowledge of the conditions that existed, or when this installation was supposed to be made, and he testified that the valve that was put in there was not a stop-and-waste valve but an ordinary gate valve which he identified and produced one from his stock. He testified at the end, on page 55 of the examination, on recross examination:

"Q. Is this an ordinary gate valve?

"A. Yes.

"Q. It is an inch and a quarter standard gate valve?

"A. Yes.

"Q. It has no vent in it, has it?

"A. No." [827]

So the valve that was originally installed was an ordinary gate valve, and not a stop and waste valve, and nobody testified when the stop and waste valve was put in the structure.

The Court: All right.

Mr. Lewis Lyon: I will offer the cross examination of the witnesses.

The Court: Admitted in evidence.

Mr. O'Hearn: The testimony of Ralph Van Patten also shows, your Honor, that none of the pipes or valves had been changed since they were put in.

Mr. Lewis Lyon: No, it does not.

The Court: I see here on page 54:

"A. I take it for granted because they are the same ah we left there.

"Q. Would you know whether they had changed any particular piece of pipe?

"A. I don't imagine they did.

"Q. You don't know whether they changed the slope," and so forth.

Mr. O'Hearn: I believe, your Honor, that on page 51 he testified that he had looked at the installations last Friday morning.

"Q. Did you observe any change in pipes or valves or vents that you recall having installed?

"A. No, I saw no change in them." [828]

Mr. Lewis Lyon: On cross examination, however, he corrects that.

The Court: We can argue that later. They are both in the record.

Mr. O'Hearn: Also, I would like to point out that the testimony as to the other freezing room was not proper cross examination, and it was pointed out at the time that Mr. Lyon was making it.

The Court: I noticed your objection there, but I would overrule it. [829]



District Court of the United States  
Southern District of California  
Central Division

Civil No. 4166-PH

York Corporation, Plaintiff, vs. Refrigeration Engineering, Inc., Defendant.

Depositions taken on the 19th day of February, 1945, at the City of Elmira, New York, before J. Leslie Winnie, Notary Public.

Appearances:

For the plaintiff:

John B. Cuninghame, Esq.,

William J. O'Hearn, Jr., Esq., of counsel.

For the Defendant:

Lewis E. Lyon, Esq.

Appearance noted of Mr. H. T. Jarvis of defendant.

By Mr. Cuninghame: Mr. O'Hearn will read the stipulation.

By Mr. Lyon: It may be deemed to be read, and may be copied into the record.

It is stipulated by and between the parties by their counsel:

1. That the hearing today is held pursuant to notices [830] served upon the defendant and now before the Notary, J. Leslie Winnie, (Chemung County Court Stenographer,) Court House, Elmira, New York.

2. That the provision of Rule 26 (a) of the Federal Rules of Civil Procedure that depositions taken prior to service of answer shall be by leave of the Court, is hereby waived.

3. That the witnesses shall be sworn by J. Leslie Winnie, who is fully qualified under the provision of Rule 28, sections (a) and (c) of the aforementioned Rules.

4. That the testimony given here shall be taken stenographically and transcribed by J. Leslie Winnie.

5. That the testimony, when transcribed, shall be submitted to the witness for examination and shall be read to or by him, and any changes in form or substance which the witness desires to make shall be entered upon the deposition by J. Leslie Winnie, with a statement of the reasons given by the witness for making them.

6. That the signing of the depositions as read and corrected by the witness is hereby waived.

7. That J. Leslie Winnie, after duly certifying the depositions, shall send them by registered mail to Hon. Edward Smith, the Clerk of the District Court of the United States, Southern District of California, Central Division, at Los Angeles, California, for filing.

8. That the cost of the original transcript, exhibits, [831] attendance fees and notary's fees shall be borne in the first instance by plaintiff, but shall be eventually charged as taxable cost to the losing party.

(The following depositions, except that of Mr. Ralph Van Patten, and all proceedings herein except the examination of the witness Van Patten, were had at the office of Swift & Company, 503 State Street, Elmira, Chemung County, New York. The examination of witness Van Patten was had at witness' place of business, known as Van Patten Plumbing & Heating Co., Inc., located at 111 East Church Street, Elmira, New York.)

By Mr. Cunningham:

The depositions that we are about to take relate to two defrosting units or devices which are installed in this building in the sausage manufacturing room and the pickle room respectively. We have delivered to defendant's attorney five photographs which we intend to offer as illustrative of witnesses' testimony about these two installations, and also a simplified diagrammatic sketch showing generally the layout of each. It occurs to me that we might facilitate matters if we go downstairs now and inspect these two defrosting devices before calling any of the witnesses.

Mr. Lyon: That is a good idea. We will make the inspection and then come back.

(At this point the parties whose appearances are heretofore noted, in company with Mr. Louis V. Smith, hereinafter noted [832] as a witness, inspected the devices referred to by Mr. Cunningham and returned to the office, where proceedings were continued.)

(Exhibits 38 to 42 inclusive marked for identification.) [833]

#### LOUIS V. SMITH

called as a witness on behalf of the plaintiff, first being duly sworn, was examined by Mr. Cunningham, testified as follows:

By Mr. Cunningham:

Q. Mr. Smith, what is your name, residence and occupation?

A. Louis V. Smith, 1028 Caton Avenue, Elmira.

Q. What is your occupation?

A. I am superintendent of Swift and Company, Elmira, New York.

(Deposition of Louis V. Smith)

Q. You are superintendent of this plant here?

A. Yes.

Q. How long have you been superintendent?

A. Since September, 1941.

Q. In what capacity were you associated with Swift and Company, prior to becoming superintendent?

A. As shipping clerk.

Q. For how long have you been associated with Swift and Company?

A. Since November, 1933.

Q. I show you, Mr. Smith, a photostat of what purports to be an invitation or announcement, being two pages, and ask you to identify the original of that.

(Stipulated for the record that Mr. George A. Personius, [834] who is expected here, is the photographer and likewise the photostater, and will produce the original when he arrives.)

A. I would say this is a photostatic copy, accurately copied from the formal announcement at the time of the opening of this plant.

Q. I show you what is apparently the original printed announcement. Is that what you refer to?

A. It is.

Mr. Cunningham: I offer the original announcement in evidence as plaintiff's Exhibit 43. I will change that offer and offer the original and substitute the photostat. (Photostatic copy marked Plaintiff's Exhibit 43-a and 43-b).

Q. Plaintiff's Exhibit 43 contains the date of July 10, 1935. Was that the date of opening of this plant here?

A. That was the date of the formal opening.

(Deposition of Louis V. Smith)

Q. By that time was the plant complete?

A. Yes, sir, it was fully completed at that time.

Q. Do you include in your answer the refrigerating units and defrosters in both the sausage manufacturing room and the pickle room?           A. I do.

Mr. Cunningham: May I interrupt the examination of Mr. Smith to let Mr. Personius tell us about these photographs so he can go?

(No objection, and witness Smith stands aside.) [835]

### GEORGE A. PERSONIUS

called as a witness in behalf of the plaintiffs, first being duly sworn, and examined by Mr. Cunningham, testified as follows:

Q. Where do you reside?

A. Elmira, New York.

Q. What is your occupation?

A. Photographer.

Q. Do you have a place of business in Elmira?

A. Yes, sir, I do, on Baldwin Street.

Q. I show you what have heretofore been marked Plaintiff's Exhibits 38 through 42 inclusive, being five photographic prints. Look at them and tell me if you can identify them?           A. Yes.

Q. Who made these photographs?           A. I did.

Q. When?

A. Friday afternoon, February 16, 1945.

Q. Where?

A. In this building, on the second and third floors.

Q. Did you also print the exhibits that you have identified?           A. Yes.

(Deposition of George A. Personius)

Q. You have the negatives in your place of business, [836] have you not? A. Yes, I have them.

Q. Were these photographs taken in the sausage manufacturing room and in the pickle cooler room respectively?

A. I would not know. I can't designate the names of the rooms.

Q. But you are sure they were taken at this plant Friday? A. Yes, sir.

Mr. Lyon: No cross examination.

LOUIS V. SMITH

recalled to the stand, and direct examination continued by Mr. Cunningham.

Mr. Cuningham: I offer in evidence Plaintiff's Exhibits 38 to 42 inclusive.

Q. Mr. Smith, I show you these exhibits and ask you to designate by reference to the exhibit numbers, which are written on the back, the particular room in which each photograph was taken.

A. This is Exhibit 38, and is in the sweet pickle cooler.

Q. I will write the word "pickle" at the bottom of Exhibit 38. Go right ahead.

A. Exhibit 39 is also in the same room, the pickle [837] cooler.

Q. I will do the same on Exhibit 39.

A. Likewise, Exhibit 40 is in the sweet pickle cooler.

Q. I have done the same on Exhibit 40.

A. Exhibit 41 is in the sausage manufacturing cooler.

Q. I will write the word "sausage" on Exhibit 41.

A. Exhibit 42 is in the sausage manufacturing cooler.



(Deposition of Louis V. Smith)

Q. I will write "sausage" on Exhibit 42. Are you familiar with the equipment shown in these photographs?

A. To a certain extent.

Q. Designate which you are talking about and describe it in your own words.

A. I don't know just how to describe it as I am not too familiar with the units.

Q. I will ask you a series of questions. Take first, the pickle room. Is cold water taken from the city mains and piped in over the refrigerator coils of the Carrier Cold Diffuser unit?

Mr. Lyon: Objected to on the ground the witness is obviously not qualified to answer the question, and further objected to as leading, he having stated he is not familiar with the structures.

Mr. Cunningham: That was not my understanding and I will ask him a preliminary question:

Q. You did state you were generally familiar with [838] these? A. Yes, sir.

Q. In your capacity as superintendent do you have occasion to inspect these two Cold Diffuser units occasionally?

A. If there were any trouble with them I would have to, yes.

Q. Have you done so on occasion during the four or five years you have been superintendent?

A. I have seen these units in operation but I have not had occasion to work on them or make any study of them so that I could figure I was any more than just familiar with the operation. I do know how it operates.

Q. You are referring to the defrosting apparatus?

A. Yes, sir.

(Deposition of Louis V. Smith)

Q. Tell us whether city water is run in through the pipes and over the coils in both these rooms?

A. Yes, it is.

Mr. Lyon: Objected to as leading.

Q. What is the temperature of that water generally?

A. I don't believe I could say.

Q. Is it just as it comes from the tap?

A. Yes.

Q. Can you tell us how that water is sprayed out over the refrigerating coils?

A. It comes in through what we call the spray pipe [839] which is perforated with holes on either side near the bottom of the pipe and water is sprayed from the pipe loosening the frost on the coils.

Q. Is that pipe inclined? A. Yes.

Q. Which way does it slope downward?

A. Toward the capped end of the pipe.

Q. Is there any provision for draining that spray pipe?

A. Yes. At the end of the pipe there is a hole in the bottom of the pipe.

Q. Does the water spray out substantially over the top surface of the coils? A. Yes, sir, it does.

Q. Is the pipe located about in the center, longitudinally, of the bank of coils? A. Yes, it is.

Q. Are these spray holes on alternate sides pointed downward toward the coils? A. Yes, they are.

Q. How is the flow of water controlled in the sausage room?

A. That is controlled from a valve directly outside of the unit.

Q. Is that valve shown in plaintiff's exhibit 41? [840]

A. Yes, it is.

(Deposition of Louis V. Smith)

Q. I notice an elbow leading into the housing, shown on Exhibit 41, and ask you whether that leads into the spray pipe as shown on Exhibit 42?

A. Yes, it does.

Q. If you want to shut the water off do you do so by means of this hand valve shown on Exhibit 41?

A. Yes.

Mr. Lyon: That is objected to as leading, and also on the ground that the witness is not qualified to answer that question.

Q. Can you tell us what this little projection is, substantially below that valve as shown on Exhibit 41?

A. That is a vent to drain the pipe.

Mr. Lyons: Objected to on the ground that the witness has not been qualified to answer the question.

Q. Is there any means of opening and closing that little vent or drain?

Mr. Lyon: Same objection.

A. Yes, there is. It is a screw type vent that can be loosened or tightened.

Q. When you tighten it you close it, and when you loosen it, you open it? A. Yes.

Q. Plaintiff's Exhibit 40, does that show the spray [841] pipe in the pickle room? A. Yes, sir.

Q. Is the operation any different in connection with this spray pipe in the pickle room than it is in the sausage room? A. No, it is not.

Q. In other words, it is the same substantially?

A. That is right.

Q. I show you Exhibit 39 and ask you to state what that shows?

(Deposition of Louis V. Smith)

A. That is the valve directly outside of the housing of the unit in the pickle room.

Q. Is that substantially the same type of valve as you have testified to in the sausage room as shown in Exhibit 41? A. Yes, it is.

Q. In addition to the hand shutoff valve does it also have a vent.

Mr. Lyons: Objected to as leading. A. Yes.

Q. Does that show more clearly in Exhibit 38 than it does in Exhibit 39? A. Yes, it does.

Q. Is that the same kind of a vent or drain you described in the sausage room? [842]

A. Yes.

Q. Exhibit 38 is a photograph of the pickle room installation? A. Yes.

Q. Will you tell us how these valves and vents are operated in defrosting both of these units?

A. In defrosting the one in the pickle cellar the valve and vent outside the unit housing are opened and left open and it is operated by a valve outside the cooler room.

Q. Is the vent always open?

A. In this line, yes.

Q. You mean the screw cap vent? A. Yes.

Q. Is the vent at the end of the spray header likewise always open? A. Yes.

Mr. Lyon: Objected to as leading.

Q. Is the operation different in any way in the sausage room?

A. Yes. In the sausage manufacturing room it is operated by a hand valve directly outside the housing.

Q. That is the little wheel valve shown in Exhibit 41?

A. That is right.

(Deposition of Louis V. Smith)

Q. What is the operation of the little vent directly below that valve in that exhibit? [843]

A. It is the same as the other. It is to vent that line to prevent water gathering and freezing in these pipes after defrosting.

Q. The hole at the end of the spray header near the cap is also always open in the sausage room, is it not?

A. Yes, sir.

Q. Do these photographs, exhibits 38 to 42 inclusive, correctly show these installations? A. They do.

Q. When were these installations made?

A. They were made prior to July 10, 1935, as shown on the formal announcement.

Q. Were they substantially the same then as they are today? A. Yes.

Q. Have they been in continuous operation since July 10, 1935? A. Yes, they have.

Q. Have they been used since that time just as we have seen them today during our inspection?

A. Yes, sir, they have.

Q. Has that use been commercial?

A. I don't understand the question.

Q. Has their use been in connection with your commercial operations here? [844]

A. Yes, it has.

Q. Has there been any secret about that use?

A. None that I know of.

Q. Have the employees had access to these Carrier Cold Diffusers? A. Yes.

Q. Could they look at them? A. Yes.

Q. No one has been cautioned to keep it secret?

A. No, sir.

(Deposition of Louis V. Smith)

Q. Who was Dan Cash?

A. He was a traveling refrigeration engineer for Swift and Company.

Q. Is he now dead? A. Yes.

Q. Was he the person in charge of the lay out of these defrosting pipes? A. Yes, sir.

Mr. Lyon: Objected to on the ground the witness has not been shown qualified to answer. He was a shipping clerk at that time.

Q. How long have you known Mr. Cash?

A. From the time I started with Swift and Company in 1933. How soon after that I met him I am not sure.

Q. When did he die?

A. I can't state that as a fact. [845]

Q. When did you hear of his death?

A. It seems to me it has been about a year and a half to two years.

Q. Was he in charge of the refrigeration layout at this plant in 1935?

By Mr. Lyon: Objected to on the ground the witness is not qualified to answer the question.

A. I could not state that for a fact. He worked on it and worked in here during that time.

Q. You know he was actively engaged here at that time? A. Yes.

Q. Where was Mr. Cash's office at that time?

Mr. Lyon: Objected to as immaterial.

A. He worked out of the construction department located in Boston.

Q. Do you mean Swift & Company's construction department? A. Yes.



(Deposition of Louis V. Smith)

Q. What address, if you know?

A. Faneuil Hall Square, Boston.

Q. Is that still the address of your construction engineers' office?      A. Yes.

Q. Are your records kept there, construction records?

Mr. Lyon: Objected to on the ground the witness is not [846] qualified to answer the question.

A. I presume that they are.

Q. Did you receive a telegram this morning?

A. Yes, sir, I did.

Q. Can you produce it please?

(Witness produces telegram).

Q. Who sent you this telegram?

A. Mr. Walter Meyer.

Q. Who is Mr. Meyer?

A. District Superintendent of Swift and Company.

Q. Is his office in Syracuse?      A. Yes.

Q. Did he send you this telegram in connection with a request you made through me last week?      A. Yes.

Q. What was that request?

A. That a copy of correspondence be shown between the construction department, possibly Chicago or our district office, in regard to the installation of these Carrier units.

Q. This is part of the records of the construction department in Boston?      A. That is right.

Statement by Mr. Cuningham:

Following a discussion with Mr. Smith on Wednesday of last week I got in touch with Mr. C. T. Richardson, who I am in- [847] formed is in charge of the construction office and the records in Boston. At my request he sent this telegram to Mr. Smith via Mr. Meyer in Syracuse.

(Deposition of Louis V. Smith)

I offer this telegram in evidence and ask to have it marked Exhibit 44.

(Exhibit marked.)

That is with the understanding, Mr. Lyon, that you except my statement subject to correction if error appear.

Mr. Lyon: That is correct. Having been around this circuit twice now I don't want to go again.

Q. By Mr. Cuninghame: Can you tell me whether this telegram refers to the installation in the pickle room or the sausage manufacturing room?

Mr. Lyon: Objected to on the ground he is not qualified to answer the question.

Q. He is better qualified than someone else will be after reading the telegram. If you are able to state?

A. The manufacturing cooler.

Q. Which do you mean?

A. The sausage room.

Q. How did you so deduce from the language of the telegram that it is the manufacturing cooler?

A. That is where our manufacturing processes are handled and not in the sweet pickle room.

Q. Read the telegram?

A. (Witness reads:) [848]

"Answering your air mail letter June 12th reference refrigeration difficulties manufacturing cooler Elmira. Situation not much better today. Cooling unit equipped with water defrosting but necessary remove ice every two or three hours causing temperature fluctuations."

Q. What is the date of that telegram?

A. June 13th, 1935, at 4:20 P. M.

(Deposition of Louis V. Smith)

(Witness continues reading:)

"Advise recommendations refrigerating inspector Cash at Elmira. Will keep him there as long as necessary. If advice Goetz satisfactory leave Sunday or Monday."

Q. Who is Mr. W. C. Fuller?

A. He is the refrigeration engineer at Swift and Company, Elmira.

Q. How long has he held that position, approximately, if you know?

A. He held that position at the time I came to work here in 1933.

Q. Is he personally responsible for defrosting the two units here? A. Yes, he is.

Q. Who is Ralph Van Patten?

A. A local plumbing contractor.

Q. Was he active in any way in reference to the installation of the two defrosting devices? [849]

Mr. Lyon: Objected to on the ground the witness is obviously not qualified to answer.

A. Yes, at that time he was working here.

Q. At what time, Mr. Smith?

A. In 1935, I couldn't tell you the date but it was during that year.

Q. I show you a schematic diagram which I state for the record I had prepared since my visit here last week. That is designed to show the defrosting devices in both rooms. Look at that and tell me if it is generally a correct diagrammatic showing of these two devices?

A. Yes, it is.

Q. I direct your attention to the device bearing the legend "screw cap drain to floor" at the right hand side of the drawing marked "Section 'A-A' ". Will you tell

(Deposition of Louis V. Smith)

me whether that is an accurate showing of that screw cap drain?

Mr. Lyon: Objected to on the ground witness is not qualified to answer that question. He stated at the beginning of the examination he was not familiar with the structure of the devices. A. It appears to be.

Q. Is it your recollection that the screw cap drain in the sausage room is located under the hand valve as shown in this drawing?

A. It is in the sausage room. [850]

Q. Is it at an angle of 180 or 90 degrees from the axis of the handvalve?

Mr. Lyon: Same objection as previously stated.

A. It is at right angles. In this one in the sausage kitchen this screw tap valve is not directly under, as it is in the pickle cellar. It is to the side.

Q. As shown in Exhibit 39? A. That is right.

Q. In the pickle room? A. Yes.

Q. And the difference also appears from inspection on Exhibit 41? Is that right?

A. Yes.

Mr. Cuninghame: I offer in evidence this diagram.

Mr. Lyon: I object to its reception on the ground the document is incompetent, irrelevant and immaterial, and never formally proven or identified.

Mr. Cuninghame: It is offered for the purpose of illustrating the witness' testimony in pictorial form.

Mr. Lyon: I object to it on further ground that the witness stated he was not familiar with the construction.

Mr. Cuninghame: I will stand on the record and the witness-statement that he was generally familiar.

(Marked Plaintiff's Exhibit 45 for identification.)

(Deposition of Louis V. Smith)

Q. What is the temperature of the sausage manufacturing [851] room generally?

A. About forty degrees.

Q. What can you say of the temperature maintained in the pickle room?

A. That is considerably lower, from thirty-four to thirty-six degrees.

Mr. Lyon: Are those both plus temperatures?

A. Those are both above zero Fahrenheit.

Q. Does the temperature of these rooms ever drop below freezing?

A. They do on occasion when we are carrying any amount of meat stock and especially over the week-end when the coolers are closed and not being used.

Q. Is the temperature inside the refrigeration housing in both of these rooms below freezing?

Mr. Lyons: Objected to on the ground the witness has not been qualified to answer the question.

A. I would say that it was from the fact that it freezes on those coils.

Q. In defrosting is the refrigeration turned off?

A. Do you mean in the cooler?

Q. Yes. Is the compressor turned off?

A. Yes.

Q. Are the fans turned off also during defrosting?

A. No, they are not. [852]

Q. Is there any interval of time between the turning on of the compressor and the stopping of the flow of water for defrosting, in your usual practice?

A. Yes, there is.

Q. What is the purpose of that interval, if you know?

A. That is to allow any water in the pipes to be drained out and the pipes to be cleared.

(Deposition of Louis V. Smith)

Q. Is it also to allow the fins to drain?

A. I don't understand what you mean by the fins.

Q. I mean the refrigerator coil. To allow the water showered over them to drain off?

A. That is correct.

Q. Of what are the pipes made, of what material?

A. Those are lead pipes, or iron. They are iron, not lead.

Q. Is there a valve and vents means connected to them?

Mr. Lyon: Objected to as already asked and answered, and as leading. A. Yes.

Q. Is there also a drip pan with a self-draining conduit?

M. Lyon: Objected to as leading.

A. Yes, sir.

Q. Your answer applies to both the pickle cooler and the sausage room installations, does it not? [853]

A. Yes.

Q. Is that conduit made of metal?

Mr. Lyon: Same objection.

A. Yes.

Q. Where does that conduit lead, Mr. Smith?

A. Out of the pan underneath?

Q. Yes.

A. It leads across the floor to the floor drain.

Q. Where does the floor drain empty?

A. Into the sewer.

Q. When the water is shut off, either by the valve outside of the refrigerator room as is the case in the pickle room, or by the valve inside the sausage room, is air sucked through the little screw cap drain indicated on this



(Deposition of Louis V. Smith)

drawing, by the action of the water running out of the spray header pipe?

Mr. Lyon: Objected to as grossly leading and on the further ground the witness is not qualified to answer the question.

A. That I would not know. I could not answer that.

Q. Can the fans be turned off if you so desire, during defrosting? A. Yes, sir. [854]

### Cross Examination

By Mr. Lyon:

Q. In the housing of either of these units while the fans are rotating and the system is in operation, there is, in the sausage room, forty degrees Fahrenheit blowing over the coils, and in the sweet pickle cellar air between thirty-four and thirty-six degrees Fahrenheit?

A. When the units are operating?

Q. Yes.

A. I am afraid I can't answer that question.

Q. The air in the sausage room is kept at forty degrees Fahrenheit, or thereabouts? A. Yes.

Q. That air is circulated through that room by these fans mounted in the cooling system to maintain that air at forty degrees, isn't it?

A. That is a question that I also cannot answer.

Q. Also you have never at any time measured the temperature of the air inside the housings of either of these units, is that correct? A. Yes.

Q. As a matter of fact, you have been in a market or store in the summer time and seen an exposed refrigerator pipe with frost on it in a room of 75 or 80 degrees, haven't you? A. Yes, sir. [855]

(Deposition of Louis V. Smith)

Q. Then your statement that the fact there was frost on those pipes indicated it must be below freezing was an error, was it not?

Mr. Cuninghame: I object to that.

A. I can't answer that question.

Q. The only basis for the assumption you made that the temperature inside the housing was below freezing, was because there was frost on the coils, is that right?

A. Yes, sir.

Q. In both of those rooms, the sausage and pickle rooms, isn't it a fact the water which is used is dumped out on the floor?

A. Yes.

Q. That water never freezes on the floor, does it?

A. I believe not.

Q. Therefore, isn't it a fact, that in both of these installations, taking for example the structure shown in Exhibit 39, and as it is shown in Exhibit 41, that the pipe beyond the valve, which you have stated to be a screw valve shown in Exhibit 41 for example, that that pipe remains full of water?

Mr. Cuninghame: What do you mean by "beyond"?

Q. Back toward the source of water as distinguished from the spray header.

A. I didn't get the first part of the question. [856]

Q. Isn't it a fact that this pipe between the source of water and the valve remains full of water?

A. I can't answer and know for sure. I don't know.

Q. Isn't it a fact, as you can observe from Exhibit 41, that this portion of the pipe in which the hand valve is located is inclined from the point where you see it enter the housing back to the point adjacent to the wall so the

(Deposition of Louis V. Smith)

point at which it enters the housing is higher than the point on the right hand side of Exhibit 41?

A. In other words you mean this appears to be higher in this picture than this point here?

Q. Yes.

A. This pipe crossing this way was originally—

Q. Just state what it is right now. You observed it this morning, did you not? A. Yes.

Q. Isn't it a fact that where the pipe enters the housing, it is higher than the part where the pipe takes off against the wall and at the elbow against the wall?

A. It appears to be very close to me, on this diagram.

Q. I will ask you to go down and measure this right now, if you are not able to answer from your observation this morning. Will you go down and measure how much higher this point of entering the housing is? [857]

Mr. Cuningham: Can't we do that later and go ahead with the cross examination now, to save time?

Mr. Lyon: It won't take any longer now than at some other time. I would rather have him go down and measure it now.

Mr. Cuningham: There is no question in regard to the pickle room, is there?

Mr. Lyon: You might measure them both.

Mr. Cuningham: In that we have reference to Exhibit 39.

Q. Have you got a level?

A. No, we have not.

Mr. Cunningham: Will it satisfy our difficulties here if we stipulate that there is presently a little slant in the direction indicated by Mr. Lyon's question, or testimony. I think Mr. Lyon was testifying for a while, in connection

(Deposition of Louis V. Smith)

with the sausage room installation, and exactly the reverse slant is true in the pickle room?

Mr. Lyon: No, it won't. Let's measure it.

(Witness Smith, Mr. Lyon, Mr. O'Hearn and Mr. Jarvis recess for the purpose of taking measurements; and upon returning, the examination is continued.)

Q. Which room are you talking about now?

A. The sausage room.

Q. The difference, was it not, was that the elbow next to the wall as shown in plaintiff's exhibit 41 is approximately [858] one and one-half inches lower than the elbow at the point where the pipe enters the housing? Is that correct? A. Yes.

Q. And in the pickle room, as shown in Exhibit 38, the elbow at the portion of the pipe where it enters the housing of the cooling unit was one-half inch higher than the elbow at the opposite end of the pipe in which the hand valve is mounted? Is that correct? A. Yes.

Q. Both of these are three-quarter inch galvanized iron pipes, are they not? A. That is right.

Q. In connection with the spray pipes as shown in exhibit 40, did you ever place a level on that pipe?

A. No.

Q. Do you know actually, then, whether it is horizontal or level?

Mr. Cuningham: Objected to as to form. You are asking the witness to speculate.

Q. Can you answer the question?

A. By sight, it is inclined.

Q. You have, however, never measured it by any method? A. That is right.

(Deposition of Louis V. Smith)

Q. You don't have a level? A. No. [859]

Q. You say that you became the superintendent of this establishment in September, 1941? A. Yes.

Q. Prior to that date had you ever actually inspected these two installations which are shown in photographs, exhibits 38 to 41 inclusive? A. No.

Q. Mr. Smith, in this same plant you have a below zero freezing room, do you not? A. Yes.

Q. How cold is that kept?

A. That depends on what product we have. That is not under my supervision and I don't have any occasion to follow the temperature of that. That is handled by whoever is storing the produce in the house and I can't say accurately what the temperature is at any time.

Q. You do know it is kept below ten degrees below zero?

Mr. Cunningham: I object to this line. It relates to another refrigerating unit, not the subject of the direct examination, and apparently totally irrelevant to this deposition.

Q. Can you answer that question?

Mr. Cunningham: I point out that Mr. Lyon is making Mr. Smith his own witness.

Mr. Lyon: Not at all. He was asked if he was the superintendent and familiar with all the structures in the plant. [860] That was the basis of his qualification and we are following through to see if that is the basis of his qualification.

Q. You do know that that room is kept below ten degrees below zero at many times?

A. I don't know that.

(Deposition of Louis V. Smith)

Q. You do know that it is kept materially below thirty degrees Fahrenheit, do you not? A. Yes.

Q. There is a refrigerating coil in that room, too, isn't there? A. Yes.

Q. It is a fact that meat is stored in that room under these various conditions and that the pipes there do frost up and that in order to defrost those pipes the meat is taken from the room, the pipes are sprayed with water by a hose, allowing the temperature to rise, and before any meat is put back in the room the temperature is reduced. Is that true? A. Yes.

#### Redirect Examination

By Mr. Cuninghame:

Q. Where is this freezing room you have just testified to?

A. On the second floor adjoining the manufacturing cooler. [861]

Q. Is that the storage room? A. Yes.

Q. What sort of refrigeration unit do you have in there?

A. I am not prepared to talk about that. I am getting into a refrigeration line that I am not familiar with.

Q. As I understand your testimony in response to Mr. Lyon, you use a hose to defrost that unit?

A. We have.

Q. Is that a rubber hose? A. Yes.

Q. How do you operate that hose?

A. I am not prepared to answer that.

Q. Do you have a nozzle on the end of it?

A. Yes.



(Deposition of Louis V. Smith)

Q. Do you spray it over substantially the entire plane of the top surface of the refrigerating unit?

A. I believe it is done that way.

Q. Is that hose self draining?

Mr. Lyon: That is objected to as calling for a conclusion.

A. I can't answer that.

Q. Where is the hose in relation to the unit? It is kept close to the unit? A. No. [862]

Q. You carry it into the cooler room and spray off the unit, is that is? A. Yes.

Q. You turn off the compressor while you are defrosting that unit? A. Yes.

Q. Do you turn off the fan? A. I don't know.

Q. Where does the water run that goes over those coils? A. To a floor drain.

Q. Where is the floor drain hooked up?

A. It goes into the city main.

Q. What controls the flow of water from the rubber hose? A. The city water pressure.

Q. Is there any valve or spigot?

A. There is, where the hose is attached to the city line.

Q. You turn that on and off when you want to have the water flow through? A. That is correct.

Q. Who measured those pipes which you have testified to on cross examination? Did you measure them.

A. No.

Q. Who did? [863]

A. Mr. Lyon.

Q. Mr. Lyon who is here in the room?

A. Yes.

(Deposition of Louis V. Smith)

Q. What type of measuring instrument did he employ, if you saw him measure them?

A. A wooden smoke stick.

Q. What is that?

A. A stick we use to hang a product on for smoking.

Q. What did he do? Describe, if you can, how he measured those, according to your observations? Take the sausage room first.

A. By placing this stick on the floor in an upright position under the elbow and on the pipe going into the unit and also by the same means and the same stick measuring at the elbow in the pipe next to the wall.

Q. Did he mark the stick? A. Yes.

Q. What did he mark it with?

A. A pencil, I believe.

Q. In each instance he rested the stick squarely on the floor, did he? A. Yes.

Q. Now, with respect to the pickle room, did he measure it in the same manner?

A. Yes, sir, he did. [864]

Q. But did he put the stick next to the place where the pipe enters the unit housing as distinguished from below the elbow?

A. I believe he measured it from the elbow.

Q. The elbow that turns toward the housing, not the one that turns toward and nearest the wall, is that correct? A. Yes.

Q. Did he also place the stick under the elbow that is nearest the wall? A. Yes.

Q. As I understand your testimony, as I recall it, it was to the effect there was substantially a half inch difference between the height at the point where the pipe

(Deposition of Louis V. Smith)

enters the housing and the height where the elbow nearest the wall is located. Am I incorrect in that understanding?

A. That answer I gave from observing the measurements on the stick from the points he had measured at.

Q. You don't recall his measuring the height at the point where the pipe enters the unit housing?

A. No.

Q. Did you, yourself, handle the stick?

A. No, I did not.

Q. But you watched Mr. Lyon do it? A. Yes.

Q. May I have those sticks? [865]

(Sticks produced)

Q. This stick which I am holding in my right hand has a mark "E" and a line just above it. Was it in the pickle room or the sausage room?

A. I think that was in the pickle cellar. I didn't see this mark in the sausage kitchen.

Q. By the process of elimination, was this other one used in the sausage kitchen?

A. That was used in the sweet pickle cellar. The one in your left hand was in the pickle room and the one in your right hand in the sausage room.

Q. What does the mark "E" on the one in my right hand signify, if you know? A. I don't know.

Q. Who put that mark "E" on there?

A. Mr. Lyon.

Q. About an inch above that is another mark. Do you know what measurement that is supposed to record?

A. No, I didn't see that one marked. I didn't see the "E" or any other letters put on there.

Mr. Lyon: You saw me put the lines on though, didn't you? A. Yes.

(Deposition of Louis V. Smith)

Mr. Lyon: You saw the difference in elevation that you testified to, didn't you?      A. Yes. [866]

Q. The one in my left hand also has a mark "E" on it. Did you see that put on?      A. Yes.

Q. What does that signify, that mark "E"?

A. That is the first measurement we took, the one in the front.

Q. In the pickle room?      A. Yes.

Q. That is shown by the mark "E"?

A. I can see it, but I don't know which he marked E, and B.

Q. I don't see any "B" on here.

(Mr. Lyon indicated a "B".)

Mr. Cunningham: I can't see it on there, but maybe there is.

(Witness Smith stands aside.)

Mr. Lyon: I will make a statement that I made these measurements in the presence of the witness Smith and Mr. O'Hearn, who watched me make the measurements. When I was finished Mr. O'Hearn said he was satisfied. The measurements the witness testified to are the difference in elevation and the actual measurements I found at the different points, I believe to the satisfaction of myself and the witness and Mr. O'Hearn.

Mr. Cunningham: The mark E is in each instance lower than the other mark? [867]

Mr. Lyon: It is not uniform on the two sticks.

The higher mark in each of the two instances is the point of measurement of the elbow directly outside of the housing of the two installations. The lower mark is

mark taken underneath the elbow at the opposite ends of the pipes.

Mr. Cuningham: You did not measure this point near the housing?

Mr. Lyon: I measured underneath the elbows in both cases.

Mr. Cuningham: But not at the point where the pipe enters the housing?

Mr. Lyon: I did not measure the pipe at the exact point of entry because there is nothing for comparison. It can be done if you wish. However, I am satisfied as to the difference in inclination.

Mr. Cuningham: I just want to be sure you are satisfied.

### W. C. FULLER,

called as a witness for the plaintiff, first being duly sworn, and examined by Mr. Cuningham, testified as follows:

Q. Mr. Fuller, where do you reside?

A. 206 Grand Central Avenue, Elmira Heights.

Q. What is your occupation?

A. Engineer for Swift and Company, the Elmira branch.

Q. Are you in charge of maintenance at this plant?

A. That is right.

Q. How long have you had that position? [868]

A. About fifteen years.

Q. Were you employed in the same capacity in 1935?

A. Yes.

Q. Were you familiar with these defrosting devices in the sausage manufacturing room and the pickle room?

A. Yes.

(Deposition of W. C. Fuller)

Q. When were they installed?

A. They were installed in 1935 when the plant was built new.

Q. When was the plant opened, if you know?

A. I think the formal opening was July 10th, 1935.

Q. Were these defrosting devices installed and in operation at that date? A. Yes.

Q. Have they been continuously in operation ever since? A. Yes.

Q. Have you personally done the defrosting on both of these units? A. Yes.

Q. That covers the period since installation took place?

A. Yes.

Q. Have these defrosting pipes or devices been in the same form ever since they were installed? A. Yes.

Q. And you have observed them how frequently, on the [869] average? A. At least once every day.

Q. How often do you defrost in the sausage room?

A. It varies under the load conditions. Approximately twice in twenty-four hours.

Q. How about the pickle room?

A. That varies more yet. Under the conditions right now we have not defrosted in there in two months. In the summer time probably once every twenty-four hours.

Q. You have a great deal of activity in the sausage manufacturing room? A. Yes.

Q. Is that true of the pickle room?

A. We don't have any manufacturing in the pickle room and not much going in and out of there.

Q. What type of compressor is used in these two installations?

A. It is a Vilter twin-cylinder speed machine.



(Deposition of W. C. Fuller)

Q. About what suction does that have?

A. We operate from thirty to thirty-five pounds. Thirty-eight pounds.

Q. Is it a six by six ammonia compressor?

A. Yes, it is.

Q. What is the temperature of the sausage and pickle room respectively? [870]

A. In the sausage room we operate around forty to forty-five degrees and in the pickle cooler from thirty-three to thirty-six degrees.

Q. Do either of these rooms ever drop below freezing on week ends? A. Only on rare occasions.

Q. What generally are the dimensions of these two rooms? A. I never measured them.

Q. Which one of these two rooms is bigger?

A. The sausage manufacturing cooler is the larger.

Q. Would you say it is twice as big?

A. No, I would say maybe a third larger.

Q. With reference to plaintiff's exhibit 45, can you tell us whether that generally shows the lay-out of the defrosting pipes in both of these rooms? A. Yes.

Q. Describe in your own words how that defrosting unit operates.

A. It is three-quarter inch pipe drilled full of holes pointing slightly downward, hooked to the regular city water line, and it defrosts by the city water.

Q. Is the water at the same temperature that it comes from the line? A. Yes. [871]

Q. How do you turn the water on and off for defrosting purposes, in the pickle room?

A. A hand shut-off valve operated from outside the pickle cooler room.

(Deposition of W. C. Fuller)

Q. How about the little cap vent or drain in the pickle room, shown on this drawing, exhibit 45?

A. We leave the cap open.

Q. Whether or not you are defrosting?

A. Yes.

Q. Is the same true of the little cap drain in the sausage room?

A. Yes.

Q. Can these drains be closed?

A. Yes, the caps can be closed.

Q. How do you operate them to close them?

A. They screw up with your fingers.

Q. Do you screw them down to open them?

A. Yes.

Q. What controls the water in the sausage room?

A. In the sausage room, when we defrost there we use the valve located just outside the unit.

Q. The valve is located within the sausage room?

A. Yes.

Q. Does that admit water to the pipe marked "single spray header" in this diagram? [872]

A. Yes.

Q. Is that pipe perforated?

A. Yes.

Q. Describe the spray holes in that pipe.

A. There are two lines of holes in it, one on each side, pointed practically downward.

Q. Are they about two inches apart?

A. Approximately.

Q. On opposite sides?

A. Yes.

Q. Are there more than two holes in the pipe?

A. Yes.

Q. A long series, as shown in the drawing?

A. Yes.

(Deposition of W. C. Fuller)

Q. At the capped end of the pipe is there any drain provided in both of these rooms? A. Yes.

Mr. Lyon: Objected to as grossly leading.

Q. Will you describe that drain?

A. It is a small hole in the very bottom of the pipe near the cap.

Q. Is the operation of this spray header in the sausage room substantially as shown in plaintiff's exhibit 42?

A. Yes.

Q. I ask you the same question with respect to the [873] pickle room as shown in exhibit 40?

A. Yes.

Q. I notice in plaintiff's exhibit 40, apparently a considerable spray of water is shown at the lower left hand corner of that picture. Can you explain what that is?

A. We have a short break in the pipe there, approximately one inch long.

Q. Does it interfere with the operation?

A. Not enough to do any hurt.

Q. Does it give you a little better drainage?

A. Yes.

Mr. Lyon: Objected to as leading.

Q. How long does it take you to defrost the pickle room, on the average?

A. Approximately a half hour.

Q. How about the sausage room?

A. About the same.

Q. Do you shut down the fans during defrosting?

A. No.

Q. Do you shut down the compressor?

A. Yes.

(Deposition of W. C. Fuller)

Q. Do you allow an interval of time to elapse between the discontinuance of the flow of water over the fin coils and the turning on of the compressor?

A. Yes. [874]

Q. About how long an interval in the pickle room?

A. From twenty minutes to a half an hour.

Q. Any different in the sausage room?

A. No, they are about the same.

Q. What is the purpose of allowing that interval?

A. To let the water drain out good from the unit and also to drain off from the floor as much as possible.

Q. Do you also let it drain out of the spray pipe?

A. Yes.

Q. What is the purpose of leaving open this little vent or drain below the valve in both cases?

A. To drain the pipes after we shut the water off.

Q. Is the temperature inside the unit housing below freezing generally in both cases?

Mr. Lyon: That is objected to on the ground the witness is not qualified to answer.

A. Yes, it is, under operating conditions, but when it is shut off it is not.

Q. Do you ever have any trouble with the pipe freezing up? A. Very little. It has frozen.

Q. Are you referring to both rooms?

A. No. Mostly in the sweet pickle room.

Q. Is that little break that we mentioned before in the end of the spray header in the pickle room due to freez- [875] ing? A. Yes.

Q. Does that interfere with the operation of that device as far as you have observed? A. No.

(Deposition of W. C. Fuller)

Q. How long has that break been in there?

A. I don't know. I didn't see it until one day last week.

Q. Do you take the front panel off the unit housing when you defrost, ever? A. No.

Q. Can you turn off the fans in both cases if you want to? A. Yes.

Q. Mr. Fuller, when the water is shut off here and here (referring to the two valves shown on exhibit 45,) does it run on through the spray header and drain off through the spray holes and lower drain near the cap?

Mr. Lyon: Objected to as leading.

A. Yes.

Q. As the water recedes down this pipe does it suck air through the screw cap drain? A. Yes.

Mr. Lyon: Same objection.

Q. Is there a drip pan in both of these? [876]

Mr. Lyon: Same objection, leading.

A. Yes.

Q. Does it, or does it not have a drain?

Mr. Lyon: Same objection.

A. Yes.

Q. Of what is the drip pan and drain made?

A. Galvanized metal.

Q. What are the pipes made of? A. Copper.

Q. These pipes coming down here (indicating on diagram) are of copper? A. Yes, sir.

Q. Mr. Fuller, in connection with the pipe shown in Exhibit 41, is that pipe slanted toward the wall as you have observed recently? A. Yes.

Q. It is downward from the housing to the elbow adjacent to the wall? A. Yes.

(Deposition of W. C. Fuller)

Q. Was that always the case?

A. No. It is normally very near level. Some of the hangars in back are loose letting this pipe drop down a little.

Q. In other words, it has sagged? A. Yes.

Q. How long has that been true? [877]

A. Quite some time.

Q. A matter of two or three years? A. Yes.

Q. Is the same true of the corresponding pipe in the pickle room which is shown best in exhibit 39?

Mr. Lyon: I don't know what the question means.

It is very indefinite and I object to it on those grounds.

Q. We will ask it again. Is the pipe likewise sagged in the pickle room? A. No.

Q. Can you say from your observation that it is substantially level? A. It is very near level.

Q. Is it so shown in exhibit 39 and 38?

Mr. Lyon: Objected to as obviously incompetent, and impossible to tell from a photograph whether it is level or otherwise. A. Apparently, in these photographs.

Q. These photographs are a correct showing of that pipe, are they not? A. Yes.

### Cross Examination

By Mr. Lyon:

Q. How long ago was it, Mr. Fuller, that you first had occasion to take the front panel off of these cooler units? [878]

A. I took the panel off about two weeks ago.

Q. When, before that, had you taken the panel off?

A. Personally I had never taken it off before.



(Deposition of W. C. Fuller)

Q. Had you ever seen the inside of this installation before you took the panel off two weeks ago?

A. Not the top of the unit.

Q. You don't know what condition was inside the unit, then, prior to two weeks ago?

A. No. I never saw it, but I know that no changes have been made in it.

Q. But you never saw it before two weeks ago?

A. No.

Q. Then what you are testifying to here is what you saw of this structure when you took the panel off two weeks ago?

A. As far as the inside of it is concerned, yes.

#### Redirect Examination

By Mr. Cuningham:

Q. Do you mean that in the last eight years you have never removed that panel from the top part?

A. That is right.

Q. Have you ever seen these pipes inside the housing until last week?

A. Not the spray header.

Q. Did you see them when they were originally installed? [879]

A. No.

Q. Under whose direction was that installation?

A. Mr. Dan Cash was in charge of the installation, I believe.

Q. Is he now dead?

A. Yes.

Q. Do you remove the lower panel on occasion?

A. No.

Q. Does anybody else handle these devices except yourself, here, at the present time?

A. Do you mean as far as defrosting goes?

(Deposition of W. C. Fuller)

Q. Yes.

A. Yes, the fellows in the sausage room defrost them, but I am the only one in the pickle room that does.

Q. Has that been true for the past eight years, eight or nine years? A. Yes.

Q. Do you know Mr. Button? A. Yes.

Q. Who is Mr. Button?

A. He is a fellow who used to work here at one time.

Q. Is he no longer working here?

A. He is not working here now.

Q. Did he ever defrost these units, if you know?

A. Not to my knowledge, no. [880]

Q. You have never had an occasion to take off that panel until this last week? A. That is right.

Q. Your units have operated perfectly for the past eight years? A. Yes.

(No cross examination.)

Mr. Cuninghame: We have noticed Mr. Van Patten on the record and are endeavoring to get in touch with him. I suggest that we recess for lunch and see what can be done about getting him over here to finish this up.

Mr. Lyon: Are we finished with Mr. Smith?

Mr. Cuninghame: I have a couple of questions.

LOUIS V. SMITH,

recalled for further examination by Mr. Cuninghame, testified as follows:

Q. Mr. Smith, in connection with the pipe in the sausage room shown in plaintiff's exhibit 41, according to your observation has that pipe always been inclined downwardly toward the wall?

(Deposition of Louis V. Smith)

Mr. Lyon: Objected to on the ground the witness is not qualified to answer the question.

A. It was called to my attention just a short time ago that that was the case. I don't have any occasion to handle that work myself or to be there to notice anything like [881] that.

Q. Did you observe any loosening or breaking of the supports?      A. Yes.

Q. Do you think that pipe has sagged due to such loosening?      A. Yes.

Mr. Lyon: Objected to as calling for a conclusion.

#### Cross Examination

By Mr. Lyon:

Q. Is it not true that the first time you saw the inside of these installations was in the last two weeks?

A. Yes.

Q. You never saw it before that?      A. No.

(Recess for lunch. Upon convening again at 1:30 p. m., the taking of depositions was resumed at the place of business of Ralph Van Patten at 111 East Church Street, Elmira, N. Y.)

#### RALPH VAN PATTEN

called as a witness for the plaintiff, first being duly sworn, and examined by Mr. Cuninghame, testified as follows:

Q. Your name is Ralph Van Patten?      A. Yes.

Q. What is your residence address? [882]

A. 221 Coleman Avenue.

Q. Elmira?      A. Yes.

Q. What is your occupation?

A. I am a journeyman plumber and steam fitter, but I am in the plumbing, heating and contracting business.

(Deposition of Ralph Van Patten)

Q. Where is your business located?

A. 111 East Church Street.

Q. Elmira, New York? A. Yes.

Q. How long have you been active in that business?

A. I have been here around eighteen years, close to eighteen years.

Q. Were you in the same business in 1935?

A. Yes.

Q. Did you in that year do any work at the Swift and Company plant in Elmira? A. Yes.

Q. What did you do there?

A. We had the contract for plumbing and heating in the entire plant.

Q. Did that work include the installation of certain defrosting pipes in the two cooling units in the sausage and pickling rooms in that plant?

Mr. Lyon: Objected to as leading. [883]

Q. Go ahead and answer. A. Yes.

Q. Did you personally install these defrosting pipes?

A. No, I didn't personally install them.

Q. Were they done under your supervision?

A. Yes, that's right.

Q. When was that work done?

A. Part of that was done before I was hurt and part of it was done after I was hurt up there.

Q. Let's limit the question to the little defrosting pipes, photographs of which I show you, being exhibits 38 to 42 inclusive. Do you recall when those pipes were installed?

A. I think both of those coils were hooked up before I went away from there.

(Deposition of Ralph Van Patten)

Q. Do you mean before your accident?

A. Yes, all the water pipe was running before I left.

Q. When was that accident?

A. I was looking up the date exactly and I went to the hospital on the 23rd day of February, 1935.

Q. You lost an eye, did you not? A. Yes.

Q. Is that how you date this installation of these particular pipes? A. Yes.

Q. Did you lose the sight of an eye on that job? [884]

A. Yes.

Q. Have you looked for and been able to find any records that would have a bearing on this particular job?

A. All I have here is a little card in back that I can show you that shows the end of the job.

Q. Would you show us that, please?

A. Yes. (Produces record card.)

Q. May I see the card?

A. Yes. If my brother was here he could find out a lot more for you.

Q. What is the date on there and what does it signify?

A. The last date is August 6th, 1935.

Q. Is that of significance with respect to when the job was completed?

A. This was for a little extra job that we done there after the contract was completed and it was paid on August 6th, 1935.

Q. I don't intend to offer that, but I would like to show it to my friends on the other side.

Mr. Lyon: All it shows are two entries: July 27, 1935, \$1.75; and August 6th, Folio entry C-32, a credit claim of \$1.75, and the name of Swift and Company, 363 State Street.

(Deposition of Ralph Van Patten)

Q. Mr. Van Patten, did you inspect these defrosting units at Swift and Company? A. Yes. [885]

Q. When?

A. I was up and looked at them last Friday morning.

Q. Did you observe any change in pipes or valves or vents that you recall having installed?

A. No, I saw no change in them.

Q. They appear to be generally in the same condition as when you installed them?

Mr. Lyon: Objected to as immaterial as to whether they appear "generally."

A. Yes.

Q. Who gave you the layout of these defrosting pipes?

A. Swift's foreman or superintendent on the job.

Q. Do you recall his name?

A. No. I can't think of his name. He was over to the hospital to see me twice.

Q. Does the name Cash mean anything to you?

A. No. He was quite a tall fellow and he was from the south.

Q. Is he over there now?

A. No. He is not there. He was just in for that job and went from there to St. Louis.

Q. Was he a Swift employee?

A. Yes, he was a traveling superintendent.

Q. Did he specify the valves and vents shown in these photographs? [886]

A. Yes, he gave us the layout and told us how he wanted it done.

Q. Did you install the drip pan or drain pan under this?



(Deposition of Ralph Van Patten)

A. No. I didn't do this. Whoever was doing the sheet metal work on the roof did that. It might have been Bartholomew and Hall.

Q. Do you recall from your inspection last week whether or not there is a drain in the floor of both the sausage and pickle rooms?

A. I don't think there is a room in the plant that don't have a drain. We put so many in.

Q. Are the floors always slanted toward the drains?

A. Yes.

Q. They are higher at the sides and lower toward the center of the room?           A. Yes.

#### Cross Examination

By Mr. Lyon:

Q. What other work have you done for Swift and Company beside this?

A. That's all we ever done.

Q. Have you ever been back to repair any of this work?

A. No. We were supposed to have gone back to change the water line outside but I don't know what was done about it. [887]

Q. You never did any other work?           A. No.

Q. How long has it been between last Thursday or Friday and the time you made this installation since you saw this installation?

A. I never saw it until the other day.

Q. You never even saw it when it was installed?

A. Yes, sure I saw it when it was installed. I was back on the job after I got back out of the hospital.

Q. When were you out of the hospital?

(Deposition of Ralph Van Patten)

A. I was in there about two weeks, then I was out about three and then I went back again for a couple more weeks.

Q. How long after you were out of the hospital was it before you went back to Swift's?

A. I think the second or third day afterwards I went up there.

Q. When you first saw this installation was the sheet metal plate over this unit?

A. No, I don't think they were. They were all knocked down for quite a while because we were running water on to them.

Q. Was that after you got out of the hospital?

A. Yes, they were still open.

Q. That was in August, 1935, then? [888]

A. No, that was not in August, 1935. This work I am telling you about was after the job was done completely.

Q. What was this job?

A. I can't tell you without looking it up. We had a regular contract and my brother was the bookkeeper at that time but you can't get hold of him now.

Q. Are you able to state that the spray pipe or valves or any of the structure has not been changed since 1935?

A. It looks exactly the same to me.

Q. Are you able to say there has not been any change or replacement there?

A. There has not been any unless a piece of pipe went bad or something.

Q. Do you know that this is the same valve?

A. Yes. They are Anaconda valves, we used them all through there.

(Deposition of Ralph Van Patten)

Q. How can you tell they are the same valves?

A. I take it for granted because they are the same as we left there.

Q. Would you know whether they had changed any particular piece of pipe?

A. I don't imagine they did.

Q. You don't know whether they changed the slope or inclination or direction of travel of these pipes, do you?

A. No. [889]

#### Redirect Examination

By Mr. Cuninghame:

Q. How do you fix this date in February so accurately?

A. I found it up to the house, exactly when I got my bills from the hospital.

Q. Did you look this up?           A. Yes.

Q. When was that?

A. While I was home yesterday.

Q. Is this valve (indicating on photograph) an ordinary plumbing fitting?

A. Yes, an ordinary Anaconda valve.

Q. Do you keep those in stock now?           A. Yes.

Q. Have you got one of them handy?

A. Yes, I think I have one of them here.

Q. Let me see it if it is not too much trouble?

A. I haven't got a small one, but here is a bigger one. They were used all through the job.

#### Recross Examination

Q. By Mr. Lyon: Is this an ordinary gate valve?

A. Yes.

(Deposition of Ralph Van Patten)

Q. It is an inch and a quarter standard gate valve?

A. Yes.

Q. It has no vent in it, has it? A. No. [890]

Mr. Neave: The next series of depositions are those taken at Yamhill, Oregon. Mr. H. Calvin White of this bar took those depositions, and I will ask Mr. White if he will present those, your Honor.

The Court: Very well.

Mr. White: We have in this group five depositions.

The Court: I believe this is your first appearance in this case, is it not?

Mr. White: That is right, your Honor.

The Court: Does the clerk have your name?

Mr. Neave: Well, he is one of the attorneys of record in the case.

Mr. White: Yes, and this is my first appearance here.

Mr. Neave: He is one of the attorneys of record in all of the pleadings, your Honor. [891]

The Court: All right.

Mr. White: These depositions consist of those of Fred L. Trullinger, C. W. Eustice, Anton Broms, Mark A. Postlewaite, and C. W. Hulse. If the court would desire a general outline of the circumstances to which these depositions relate, it might aid the court in placing in the various events the significance of one deposition, that of Anton Broms, which we would like first to read into the record.

The Court: I don't have any desire about anything when I am trying a law suit.

Mr. White: I thought perhaps that what Mr. Broms had to say might clarify it.

The Court: Except in the matter of expedition and the saving of useless repetition of things that are perhaps technically material, such as a man's name and address, how long he lived here, and what he did on such-and-such a date, and so forth. Counsel have been summarizing those things and then taking the portions of the depositions which they considered material to the dispute here and reading them.

Mr. White: Yes. I think a general statement concerning what the deposition shows occurred up there and the relation of the parties will be helpful.

The Court: Go ahead. If Mr. Lyon sees anything wrong with it he will object, I suppose.

Mr. Lewis Lyon: I am particularly desirous of expediting [892] the trial in any way it can be expedited, but I don't think the statement of counsel as to what the depositions prove is evidence.

The Court: Including your statement?

Mr. Lewis Lyon: Including my own.

Mr. White: It was not my purpose to comment on anything relating to proofs of any consequence, but merely the general picture up there and who the parties were.

The Court: Go ahead with your statement. If there is anything wrong with it, we will let counsel interrupt you, or I assume he will interrupt you anyhow.

Mr. White: This series of depositions has to do with the installation of a refrigerating plant, specifically a locker plant made at a place called Yamhill, Oregon, about forty miles out of Portland, Oregon. The occasion for this installation was the desire on the part of two de-

ponents, Fred L. Trullinger, who with Mr. Eustice owned a general store in this community of Yamill, and who decided to install a locker plant. For that purpose the necessary building construction was made and arrangements were entered into with a company known as Electrical Products, Consolidated, which had its principal office in Seattle, with a branch office or branch office personnel in Portland, to install the necessary refrigerating equipment. So we have Trullinger and Eustice as the proprietors of the store and plant. The Portland [893] branch of Electrical Products was managed by C. W. Hulse. Working with or under him were an engineer, Mr. Mark Postlewaite, and an installation and service man, Anton Broms, who manually made the installation of at least the greater part of the refrigeration equipment.

That is all, I think, that is necessary in the way of general background to relate these people.

The Court: There is no objection to that statement, instead of reading all of it, is there?

Mr. Lewis Lyon: No.

The Court: I don't see how it could materially affect it. I mean, there have been thousands of refrigerating plants built all over the country,—

Mr. Lewis Lyon: That is correct.

The Court: —and what we are concerned with are the defrosting methods they used.

Mr. Lewis Lyon: That is correct.

Mr. White: Now, if the court will permit, we would like to read the deposition, the direct examination, first, of Anton Broms.

The Court: Do you have the originals?



Mr. Neave: They should be filed with the court. They were filed, and I don't know where they have disappeared to.

Mr. O'Hearn: They were here some time ago.

The Court: Very well. The clerk will find them. This is [894] what witness now?

Mr. White: Anton Broms.

The Court: And who is he, again?

Mr. White: He is the man who made the installation. He was the service man and made the installation on the job.

The Court: Very well.

#### ANTON BROMS,

was thereupon produced as a witness in behalf of the plaintiff and, having been first duly sworn by the Notary, was examined and testified as follows:

#### Direct Examination

By Mr. White:

Q1. Mr. Broms, will you state your full name and address, please.

A. Home address or business address?

Q2. Both, please.

A. Anton Broms; business address, 700 Southeast Hawthorne in Portland, Oregon.

Q3. In what business are you engaged?

A. Refrigeration Service & Sales, commercial.

Q4. Do you own that business?

A. Yes, sir; I am a partner in it.

Q5. What experience have you had in the past relative to refrigeration equipment?

A. I have had sixteen, pretty near seventeen years. [895]

(Deposition of Anton Broms)

Q6. What has been your activity during that time?

A. Service, installation and sales.

Q7. What do you mean by "service"? We are speaking always of refrigeration equipment.

A. Maintaining it, making it run when it won't run, and repairing.

Q8. What do you mean by "installation"?

A. Well, mostly on new jobs, installing them, hooking up the blowers or coils to the condensing unit, making it operate correctly.

Q9. Have you had during those years experience in the maintenance and installation of locker plants?

A. Yes, I have on quite a few different locker plants.

Q10. Will you elaborate and tell us more about your experiences, the types of equipment involved, and more concerning their installation.

A. Well, I have installed what they call brine diffusers, cold water diffusers, hot gas defrosting systems, and electrical defrosting systems. I installed the first locker plant, I would say, about nine or ten years ago at Klamath Falls.

Q11. Have you installed other plants since that date?

A. Oh, yes, installed some around.

Q12. Roughly how many?

A. Oh, ten; maybe fifteen.

Q13. What makes of equipment have you serviced and [896] installed?

A. The Carrier was the first one I installed, and I have installed Par compressors, and—what is the name of that outfit in St. Louis?—Marlo brine units—Recold water defrosting units for locker plants, Mills compressors.

(Deposition of Anton Broms)

Q14. Did you at one time work for Electrical Products Consolidated?      A. I did.

Q15. Where did you work for that company?

A. Well, I did their installation work. I was in business for myself at the time, but I did their installation work. They were located out on about 30th and Sandy in Portland.

Q16. In what business was Electrical Products Consolidated engaged at that time?

A. Well, they were in the sign business as well as in the refrigeration business.

Q17. Did you have anything to do with refrigerating equipment working for Electrical Products Consolidated at the Yamhill, Oregon, store and locker plant of Trullinger & Eustice?

A. I did. I installed the job in the first place.

Q18. When you say "the job," will you state more specifically what you mean?

A. Well, we put in the condensing unit in the basement in the building that was hooked onto the Carrier cold diffuser, [897] and we also had a blower type coil in the pre-cooling room.

Q19. When you say "we", to whom do you refer?

A. I speak of the Electrical Products. I was working for them on the job.

Q20. Was any one else from Electrical Products working on the job?

A. Not actually working on the job. A man by the name of Hulse was out a time or two when I was working on the job, and also a man by the name of Neil—I don't remember his name.

(Deposition of Anton Broms)

Q21. Do you know Mr. Mark Postlewaite?

A. Yes, I know Mark Postlewaite.

Q22. Was he connected with this job?

A. Mark came onto the job just about the time we had it installed. That is, he came to work for the Electrical Products, as I remember it. I think he was out here once; maybe twice.

Q23. Have you today inspected the Trullinger & Eustice locker plant here at Yamhill? A. I have.

Q24. Will you describe the parts of that plant which were cooled by refrigerating equipment when you made the installation as you have testified, if those parts are still identifiable?

A. Well, they have the cold diffuser, they used to call it—I think they still call it that—that is in the [898] pre-cooling room. It is a ceiling type blower.

Q25. Let me interrupt, please. Did you install that ceiling unit?

A. Yes, I installed that at the same time.

Q26. What make of unit is it? A. Carrier.

Q27. And what type?

A. Well, the type—the only way I can tell you the type is I copied the numbers off of the type. I think that is a 15-K, was the type of blower that that was.

Q28. Was any other refrigerating unit then installed?

A. The big floor type cold diffuser was installed in the locker plant—not in the locker plant; just outside the locker plant.

Q29. What do you mean by the locker plant?

A. Where the zero temperature or thereabouts is maintained to hold the meat.

(Deposition of Anton Broms)

Q30. Do you mean the locker room?

A. The locker room.

Q31. When did you last see that Carrier diffuser unit? A. About fifteen or twenty minutes ago.

Q32. Can you identify it?

A. Yes, I think I could swear to it that that was the same one.

Q33. Does that unit carry any markings or identification? [899] A. It does.

Q34. Do you know what they are?

A. Well, one, of course—that could be done on any unit, I suppose, but one is a hole in the end of the housing.

Q35. No, I mean by markings a “Carrier” identification.

A. Oh, it has the “Carrier” label on it, stamp on it.

Q36. Have you inspected the label?

A. Yes, I have.

Q37. What did you find on the label?

A. Well, on the label you have got “15Q2-114”. That is the type. “Serial 2254A, Job S68619.”

Q38. You are reading from a slip of paper?

A. Yes.

Q39. What is that slip?

A. That is a slip of paper that I copied the numbers off of the cold diffuser that is in the locker room.

Q40. How long ago?

A. Oh, fifteen minutes; a half an hour, maybe.

Q41. When you first installed that diffuser unit where was it placed?

A. It was placed just outside of the locker room.

Q42. In what place?

A. In the pre-cooling room.

(Deposition of Anton Broms)

Q43. How do the pre-cooling and locker rooms, insofar as the room arrangement is concerned, compare today with their [900] arrangement when you installed this equipment?

A. They are the same today as they were then as far as the rooms in connection with each other are concerned.

Q44. How are they separated?

A. By a wall going to the pre-cooling room first, through the pre-cooling room and through another door into the locker room.

Q45. And the last mentioned door is in the wall separating the two rooms?

A. Separating the two rooms.

Q46. Now at the time you installed the Carrier diffuser where was it placed, in the chill or pre-cooler room?

A. It was in the pre-cooling room, just to the left of the door going into the locker room itself.

Q47. Where with relation to the wall separating the two rooms?

A. Up against the wall, or practically against the wall going into the locker room, the wall separating the chill room and the locker room.

Q48. Have you today inspected that diffuser unit?

A. I have.

Q49. And do you recognize it as being the original?

A. As nearly as I can say. I feel reasonably certain it is the original unit.

Q50. Will you please describe that unit. [901]

A. Well, it is what they call a floor type unit. The bottom part extends from the floor up to the bottom compartment. There are three compartments or three sections to it. The bottom compartment is open, and on the



(Deposition of Anton Broms)

bottom or open part is a drain pan, and just above this section is the coil section of the diffuser, and above this is the fan section of the diffuser.

Q51. Will you describe the coil section.

A. Well, it is a coil of copper tubing that runs through there with fins on it. I don't remember the size of it. It is a coil.

Q52. With fins on the pipe?

A. Fins on the tubing, yes.

Q53. How do the fins extend?

A. The fins are up and down, vertical.

Q54. And the coils run—

A. The coil itself is horizontal, with a return or bends on the end.

Q55. You spoke, Mr. Broms, of a drain or drip pan bottom section. What is the purpose of that section?

A. When the coil is defrosted it carries away the waste water or waste ice, or whatever it is, that melts off the coil.

Q56. When you installed this unit where was such waste water taken?

A. Went right down through the floor. As I remember it, [902] the drain on the drain pan is in the center of the drain pan, and we drilled a hole right down through the floor.

Q57. Then the drain pipe came down through the floor? A. Came down through the floor.

Q58. And from that point where did the drain pipe first go?

A. Well, to start with we never had anything coming out of the drain pipe, and I don't remember whether right then we ran it outside or if that was a little bit later.

(Deposition of Anton Broms)

Q59. What do you mean by "outside"?

A. Well, we ran it out where it came down through the floor. We ran it out over the basement door to the outside and dumped it outside of the basement on the ground.

Q60. Then did the drainage go through this pipe and just discharge out to the outside?

A. By gravity to the outside.

Q61. When installed as you have described in the pre-cooler room, the room also contained this ceiling unit of which you spoke? A. Yes.

Q62. Was the Carrier diffuser unit visible in the room?

A. You mean the diffuser for the locker room?

Q63. Yes. A. Yes, that was sitting—

Q64. I mean the third section.

A. Yes. That was sitting in the chill room or pre-cooling [903] room.

Q65. Was any provision made for defrosting the coil on this unit? A. We tried hot gas defrosting.

Q66. Mr. Broms, when you say "we", may it be understood that you mean that you personally did or took part in whatever you describe? A. I did, yes.

Q67. In the following, Mr. Broms, will you refer to what you did or what was done under your direction?

A. I will try to, but in my business down there I don't say "I". I say "we" all the time, and when I am working for somebody else I say "we". I may be doing it personally, doing the work myself, but I always refer to it as "we" as long as I am working for somebody, and the same way with my business down there. I don't say "I". I say "we."

(Deposition of Anton Broms)

Q68. For my purposes here, I merely want to make it clear that the things which you saw were—

A. What I did?

Q69. —what you did. A. That is right.

Q70. Will you describe this hot gas defrost system to which you referred.

A. Well, I can describe part of it. It wasn't satisfactory, and I said in the first place it wasn't satisfactory, but that [904] the idea of a hot gas defrost is to run the discharge gas back through the coil that you want to defrost. But to do that you have to have someplace to get some gas to run back there, and it won't do it without having something to draw your hot gas from.

Q71. Was that true of this Yamhill installation?

A. That is true of the Yamhill installation.

Q72. Did you try hot gas defrosting?

A. Yes, I tried hot gas defrosting.

Q73. What happened?

A. Well, I froze up one of the condensers and busted it, but I couldn't get enough heat into the coil to melt the ice off of the coil.

Q74. Do you recall approximately how long you worked on this hot gas defrosting attempt?

A. Well, I tried at different times. I was afraid of freezing the condenser on the machine, which finally happened, but I tried to draw a little bit to get a little hot gas, but I had nothing to draw hot gas from, so that it was a failure right from the start as far as hot gas defrosting.

Q75. How long did you attempt to make it work after you first started the installation?

A. I would say two or three days.

(Deposition of Anton Broms)

Q76. Upon finding that the hot gas defrost would not work what did you then do?

A. I came out there one morning and the coil was all [905] covered with ice, and the temperature was crawling up in the room.

Q77. You mean the coil was covered with ice?

A. The coil in the chill room that was cooling the locker room.

Q78. In the Carrier diffuser unit?

A. In the Carrier diffuser.

Q79. Yes. What other temperature did you refer to?

A. To the temperature in the locker room. We had started to pull the temperature down—I had—and the temperature was coming down nicely, and when I came out this morning the temperature had started to crawl up again. And I had to do something to get the ice off of the coil, because it was blocked so that the air would not circulate through, and when the air wouldn't circulate through you would not get any temperature in the room because you would not get any cold out into the room.

Q80. What did you then do?

A. Then I took a hose from outside and pulled the hose in there and took the peephole off of the side and squirted water over the coil and washed the ice off of the coil.

Q81. What did you do then with reference to the water defrosting?

A. Well, I went back home—this was in the morning, and I went back home that afternoon. I had a brilliant idea, and I took a piece of pipe and drilled it full of holes on one side, in a straight line on one side, very small holes in it, and as close together as I could get them in the pipe.

(Deposition of Anton Broms)

And I brought it back out the next morning and I drilled a hole in the housing of the cold diffuser for the locker room, and inserted the pipe in through that hole and fastened the far end with a clamp, a pipe clamp. to hold it in place in the center, and also so that it would drain out when the water was shut off. And on the outside of the housing I put an elbow with a piece of pipe in it that I would judge was twelve to fifteen inches long, and on this end of this pipe I put a hose coupling on and screwed the hose onto it, water hose.

Q82. What kind of a hose? A. Water hose.

Q83. Rubber hose?

A. Rubber hose, sprinkling hose, or whatever you might call it.

Q84. About what size? A. Five-eighths.

Q85. Five-eighths inch? A. Five-eighths inch.

Q86. Then what did you do with that hose?

A. Then I turned the water on. I had it hooked up on the other end on the water faucet.

Q87. Now describe the course of the hose beyond this pipe, [907] or this handle to which you referred. Where did the hose then go?

A. Well, it went out through the pre-cooling room door. I don't remember just where I connected it on outside, but there must have been a faucet there someplace that I hooked onto, but I know that I left the pre-cooling room door open, let the hose come in there, and then I turned the water on and I stood there with this piece of pipe that was twelve to fifteen inches long in my hand and rocked it back and forth so that the holes in the pipe would spray the water across the whole coil and wash the ice off of the coil that way.

(Deposition of Anton Broms)

Q88. Did you then do anything further?

A. Then I shut the water off and disconnected the hose and took it out. I saw that it worked so well that I made provisions downstairs. I put a stop and drain cock there and put the water on, ran up through the floor and hooked it onto the piece of hose that went onto the pipe.

Q89. When you say "downstairs" you mean in the basement?

A. In the basement, below the pre-cooling room.

Q90. From what source did you obtain the water?

A. Well, it came off of one of the lines—I hooked a piece of pipe onto one of the lines down in the basement. I don't remember just what the source was, but then I suppose it was city water. That is what they had down there. I cut a tee into the line and ran a piece of half-inch water pipe [908] over there to where I wanted to go up through the floor.

Q91. You used the city water supply?

A. City water supply.

Mr. Lewis Lyon: I withdraw the objection.

The Court: Does he fix a date as to when he did this?

Mr. White: The date when this was done is fixed by other testimony.

The Court: All right.

Mr. White: I am now reading from page 137:

Q. To what pipe was this valve to which you referred connected?

A. It was down in the basement under the pre-cooling room.

Mr. White: That is the question in the third line on page 137.



(Deposition of Anton Broms)

Mr. O'Hearn: Yes. That is the answer: It was down in the basement under the pre-cooling room.

Mr. White: That was followed by a second question: Where did the pipe to which this valve was connected run?

Q94. Did you at any time observe the water which passed that valve?

A. I don't understand the question.

Q95. Did you yourself make any provision for water and source of water supply to this valve?

A. I did. [909]

Q96. Where did you get the water?

A. Off of the pipe down in the basement. There was a cold water pipe running across in the basement, and I cut a tee into that line and ran another piece of pipe over to where I wanted to go up through the floor.

Q97. Was that water pipe already in existence?

A. The water pipe was in there. If I might clarify that supply source—

Well, the only thing, I remember that I had to go and shut off the water supply coming into the building.

\*   \*   \*   \*   \*   \*   \*   \*   \*

Q100. After you connected the stop and drain valve with the hose as you have testified, did you operate the water defrost system?      A. I did.

Q101. What did you do in the course of operation of the defrost and the coil in the Carrier diffuser unit?

A. Shut the condensing unit off and shut the fan off in the cold diffuser, turned the water on down in the basement, and went upstairs and got hold of that pipe and pushed it back and forth.

(Deposition of Anton Broms)

Q102. Where did you turn the water on down in the basement? [910]

A. At the stop and drain valve that I had put in there.

Q103. When did you last see that stop and drain valve?

A. I don't know. I suppose right now I see it lying on the table.

Q104. I show you a corroded connection with pipe nipples and an elbow marked "1/2 Crane." Do you know what that is?

A. That is a stop and drain valve with an elbow and two nipples on it.

Mr. White: Do we have that exhibit here?

Mr. O'Hearn: We should have it here.

The Court: That was in this box?

Mr. O'Hearn: No, not that one. That was the Indianapolis exhibit.

The Clerk: It is right here, I think.

Mr. O'Hearn: It was in a large box, when I saw it last.

Mr. Neave: Mr. O'Hearn saw the exhibit in the clerk's office.

The Court: You mean the other day?

Mr. O'Hearn: The other day, your Honor. It was all in a cardboard box, a packing box.

That is it, your Honor, I think.

The Court: That is the Indianapolis deposition.

Mr. O'Hearn: Then it was in another box similar to that.

The Court: It may be in the clerk's office.

The Clerk: I will go up and see. [911]

(Deposition of Anton Broms)

Mr. Lewis Lyon: The originals of the depositions are not in the court room, your Honor?

The Court: They do not seem to be, according to the clerk.

Mr. Lewis Lyon: They ought to be found, if they have been filed. I don't know if they were filed.

Mr. O'Hearn: Yes, they have been filed.

The Clerk: They were filed.

Mr. Neave: Mr. O'Hearn checked all of the depositions and exhibits before the trial started, checked them in the clerk's office.

Mr. O'Hearn: That is right. [912]

The Court: I have noticed a lot of testimony about those valves but as far as the patent is concerned I cannot see much difference, whether it was a stop-and-waste valve or drains into the basin or sewer or where it drains. I may be wrong and I suppose at the appropriate time counsel will point it out to me.

Mr. White: This will be offered as the original valve used in the installation to identify it to the extent of what was put into the plant.

Q105. Will you describe how such a valve is operated?

A. Yes, sir. There is an adjustment or a little valve on the side of it that when you close the valve you open that and it drains the water that is in the pipe beyond the valve.

Q106. You refer to the brass—

A. Knurled brass.

Q107. Knurled knob on the side of the valve?

A. Yes.

Q108. The valve appears to have a stem without a handle. What was the function of that stem?

(Deposition of Anton Broms)

A. At the time there was a wheel on there, and the function of that stem was to open and close the valve.

Q109. When you opened and closed the valve, what did that do with reference to the water supply to the hose and spray pipe?

A. When you opened the valve the water went up into [913] the spray pipe, and when you closed the valve it shut the water off.

The Court: Where did he say he got this?

Mr. White: He removed it from the pipe.

The Court: Just before the deposition?

Mr. White: Yes.

The Court: All right.

Mr. Lewis Lyon: The witness said the first time he saw it it was sitting on the table in front of him.

The Court: That was the last time he saw it.

Mr. Lewis Lyon: But this witness hadn't testified that he removed it.

Mr. O'Hearn: Not yet.

The Court: All right.

By Mr. White:

Q110. All right. Now after you had manipulated the spray pipe, as you have described, about how long did that manipulation take, or about how long did you so manipulate the spray pipe?

A. Well, that would be a guess entirely, but I would say maybe ten to fifteen minutes.

Q111. And what determined the length of time which you would manipulate the spray pipe?

A. Until the frost was all washed off of the coil.

Q112. How was it possible for you to know that the frost [914] was washed off the coil?

(Deposition of Anton Broms)

A. There is an opening in the side of the cold diffuser in the third section, just above the center section coil, that you can open and look in on top of the coil. You can also look underneath through the opening there up at the bottom of the coil.

Q113. Did you observe the condition of the coil through that opening before a defrosting operation?

A. Oh, yes.

Q114. And how did the coil appear?

A. Appeared with a coating of frost over it.

Q115. To what extent?

A. Well, I don't know as to what extent. It was all covered with white frost. That is, of course the fins are in there, and the holes would not be tight because then no air—that is, the openings between the fins would not be closed tight because then the air would not go through, and the object was to defrost before that happened.

Q116. How close to closing those openings would the frost accumulation, within your observation, come?

A. Well, that depends on the fins' spacing entirely. One fin spacing, if it is a wide fin spacing, it might take up an eighth of an inch; might take up to a quarter of an inch.

Q117. But I mean in this particular unit will you give [915] us an idea as to the bulk of frost accumulation that you saw on the coil?

A. I would say about an eighth of an inch on the fins.

Q118. Then in order to get the proper sequence, is it correct that you stated that before starting defrosting—

Mr. Lyon: I think the witness ought to be allowed to testify.

Mr. White: All right.

(Deposition of Anton Broms)

Q119. After you observed the coil and decided to defrost it, what did you then do?

A. Shut the condensing unit down and shut the fan off in the cold diffuser.

Q120. What was the condensing unit? What was its function?

A. That is a compressor, otherwise called a compressor condensing unit. That is what pulls the hot gas down and condenses it back into a liquid form.

Q121. All right. Now, after the condensing unit and the fan were shut down what did you then do?

A. Turned the water on down in the basement on this stop and drain cock, and went upstairs and rocked this lever back and forth until the ice was melted off of the coil. Then I would go down and shut the stop valve off.

Mr. White: The stop valve being the one that you hold in your hand, and which I wish now to have so identified as [916] Plaintiff's Exhibit Y-21.

(The valve referred to was marked Plaintiff's Exhibit Y-21 for identification.)

Mr. White: Q122. You shut off the valve?

A. I shut off the valve and opened the drain.

Q123. Why did you open the drain?

A. To drain the water out of the line so that it would not freeze.

Q124. Why would it freeze unless drained?

Mr. Lyon: That is objected to as calling for a conclusion of the witness.

The Court: Objection overruled.

A. The temperature in the room, or in the cold diffuser, rather, was cold enough where it would freeze water in the pipe unless there was some way to drain it



(Deposition of Anton Broms)

out; and if you didn't open it at one end and let the air pass through and let the weight of the water drain itself, it would form a vacuum and not allow the water to drain out of the pipe.

Q125. Upon opening this bleeder, that is, the narrow bleeder in the side of the valve, did all the water drain out of the supply line and the spray pipe?

A. Yes, it would all drain out.

Q126. What would happen to any water in the perforated spray pipe? A. It would freeze. [917]

Q127. Did it freeze? A. It did not freeze.

Q128. Why didn't it? What happened?

A. The water that was in that—

Mr. Lyon: Objected to. The witness already stated that it froze.

The Court: Objection overruled. Go ahead.

By Mr. White:

Q129. Will you explain exactly what water froze?

A. Did I say that it froze or that it would freeze?

Mr. White: You said it would freeze.

Mr. Lyon: He said that it did freeze.

Mr. White: Read his answer.

(The record was read as requested.)

The Witness: It would freeze if the water stayed in there.

Q130. But did the water stay in there?

A. No water stayed in there.

Q131. What happened to it?

A. It drained out.

Q132. Out of the spray pipe?

A. Out of the spray pipe, as well as out of the hose that connected to the spray pipe.

(Deposition of Anton Broms)

Q133. How was it permitted to drain out of the spray pipe? [918]

A. By opening the knurled bleeder nut, as you called it, on the stop and drain valve, and that let the water come out down below, whichever way the weight was the most. The water would run out below there, and when the water was all out the air would go in and let it go up and drain out the other end of the line.

Q134. All right. When it drained out the other end of the line, where did the water drain?

A. Drained down into the drain pan on the cold diffuser.

Q135. What did it drain through?

A. Drained through this spray pipe that I had in.

Q136. Then through perforations in the spray pipe?

A. Yes, through perforations in the spray pipe.

Q137. One end of the spray pipe was inside the unit, was it not? A. Inside the unit.

Q138. Was that end opened or closed?

A. No, that was closed, with a cap on it.

Q139. After the water was permitted to drain from the line, then what did you do?

A. After it had drained off of the coil what I thought was necessary, then I started the fan in the cold diffuser in the locker room, and then I went down and started the condensing unit. [919]

Q140. Did you operate the defrost system as you described one or more times?

A. Well, I don't remember that, but then I think that I came out and defrosted it two or three times, and then I showed Mr. Eustice how to do it.

(Deposition of Anton Broms)

Q141. Did the water defrost system ever fail to defrost the coil?           A. Not that I know of.

Q142. What was the appearance of the coil after the defrost operation?

A. When I saw it the coil was clean; no ice left on it.

Q143. Was that the condition of the coil after each time you operated it?           A. After each time.

Q144. Did at any time within your knowledge water freeze in the spray pipe?

A. Not to my knowledge.

Q145. How could you tell?

A. Well, the only way I could tell would be that when I came out and turned the water on again it went right on through.

Q146. And therefore there was no water frozen in the hose?           A. Apparently not.

Q147. Well, the water could only get to the spray pipe [920] through the hose; is that not correct?

A. That is correct.

Q148. Now, are you familiar with the metal shell temperature of this Carrier diffuser unit? What can you tell me about the temperature of the metal shell?

A. The temperature of the shell of the diffuser would depend quite a bit on the temperature of the cold air going through, which is different at different times.

Q149. All right. Now did you observe the temperature condition in the locker room while this water defrost system was installed?

A. Well, I suppose I must have observed the temperatures, but I don't remember. I wouldn't say now what they were. But then apparently they were satisfactory, because they were holding things in there all right.

(Deposition of Anton Broms)

Q150. How did the temperature inside the Carrier unit compare with the temperature in the locker room, if you know?

Mr. Lyon: That is objected to as calling for a conclusion of the witness; on the further ground there is no foundation laid for any such assumption or conclusion or opinion.

The Court: All he is asking him here is if he knows. If he knows, he can testify to it; if he does not know, he cannot. Objection overruled.

A. It would depend considerably on what the diffuser temperature is. As a rule there is a set differential—or [921] not a set differential. but depending on the expansion valve, on the size of the unit, and everything like that, as to what the temperature difference is between the coil and the air that is passing over it.

Q151. Do you know whether the air leaving the diffuser unit would be at a higher or lower temperature than the air entering it?

Mr. Lyon: That is objected to as calling for a conclusion of the witness.

The Court: Overruled.

A. Well, the air entering the cold diffuser is warmer than the air leaving it.

Mr. White: Q152. Do you know whether in this instance the temperature of the leaving air was above or below the freezing temperature of water?

Mr. Lyon: That is objected to as calling for a conclusion of the witness. The witness said he never recorded or took the temperature of any such air.

Mr. White: Strike the question, then.

(Deposition of Anton Broms)

Q153. In stating that you drained the water out of the line to prevent freezing in the spray pipe, is it not true that you must have anticipated possible freezing in that pipe?

Mr. Lyon: That is objected to as leading and suggestive and calling for a mere supposition or conclusion, and is incompetent, irrelevant and immaterial. [922]

The Court: Yes, it is.

Mr. White: I will strike the question.

Q154. Why did you drain the water out of the line?

Mr. Lyon: That is objected to as calling for a conclusion of the witness, as to why he drained it out.

The Court: That is asked and answered. He already testified he drained the water out of the line to keep it from freezing.

By Mr. White:

Q156. Mr. Broms, I show you a photograph marked Plaintiff's Exhibit Y-15 and ask you if you can identify what is there shown.

A. It looks very much like the stop and drain cock that I installed in the ceiling of the basement.

Q157. How does the stop and drain cock appearing in that photograph correspond, to the best of your recollection, with the stop and drain valve which you testified to using when installing and operating the water defrost system?

A. Well, it looks like the same kind of a stop and drain cock that I put in there.

Q158. We see in the photograph a run of pipe connecting with the elbow marked "X". To what location did that pipe run?

A. This long pipe that is connected with the elbow?

(Deposition of Anton Broms)

Q159. Yes. [923]

A. It ran back to the pipe that ran across the basement—I don't know—I would judge probably ten feet from there.

Q160. And what was the purpose of that pipe?

A. To supply water to the stop and drain and on beyond to the cold diffuser.

Q161. Does the valve marked "X" within the circle appear to be the same as the valve which we have here as Plaintiff's Exhibit Y-21?

A. I would say it was.

Q162. I am not sure whether I have asked this question, and therefore I want to get it in the record. Where did you get this exhibit, Plaintiff's Exhibit Y-21?

A. Well, I just took it off the pipe over in the basement.

Q163. This afternoon? A. This afternoon, yes.

Q164. There appears to be above the elbow a dark area in what appears to be a wall of some kind. Can you identify that dark area?

A. Well, it looks like the hole that I shoved down through the floor to run the water pipe up through.

Q165. Did you inspect that hole this afternoon?

A. I did.

Q166. How does the appearance of that hole correspond [924] with your recollection of the pipe you refer to as having been run up through the floor?

A. Well, it was right above where the connection was to the elbow going up there, and the hole was an odd-shaped hole. And I know why, because I had an awful time getting down through there, and I had to chisel out when I was going through there because the first hole



(Deposition of Anton Broms)

didn't come down straight, and I ran into timber, I think it was, or something in there, and I had to move the hole over to one side.

Q167. Therefore, the hole appears elongated rather than circular? A. That is right.

Q168. Now you referred to a pipe as having been run up from this elbow directly below the hole through the floor. Where did that pipe go?

A. Well, it went up just through the floor, and then I put a piece of hose on there that went onto the spray pipe in the cold diffuser.

Q169. That is the hose to which you referred a while ago as having been attached to the spray pipe?

A. That is right.

Q170. I show you another photograph marked Plaintiff's Exhibit Y-14 for identification, and ask you to identify the pipe marked "X."

A. Well, that is the elbow where the stop and drain [925] cock was fastened to.

Q171. Now this view shows what appears to be another pipe with a scroll "D" on it. Can you identify that pipe?

A. Well, it looks like the drain pipe from the cold diffuser.

Q172. Where does that run of pipe which appears prominently in the picture go with respect to the floor?

A. It goes up through the floor and into the bottom of the drain pan on the cold diffuser.

Q173. Where does that pipe go, it at all, with relation to the present location of the cold diffuser? I believe you testified that it is now in the locker room.

A. Well, it goes up to the bottom of the cold diffuser, to the drip pan.

(Deposition of Anton Broms)

Q174. That pipe "D" goes up through a hole in the floor, does it?           A. Yes.

The Court: Pipe "D"? It isn't marked here.

Mr. O'Hearn: Here it is, your Honor.

The Court: That is Y-14.

Mr. White: We are now referring to Y-15, I believe.

The Court: That is "D"?

Mr. O'Hearn: Yes.

The Court: All right. That is the big pipe in the center of the picture, is that right? [926]

Mr. White: Yes.

The Court: All right. I think I have it. Mr. O'Hearn showed me the original here.

By Mr. White:

Q175. Will you compare the present location of the place where that drain pipe goes through the floor with your recollection of the location where the drain pipe went through the floor in the installation which you made and concerning which you have testified?

Q176. You spoke of running a drain pipe from the unit down through the floor; is that correct?

A. That is right.

Q177. How did you get the drain pipe down through the floor?           A. I made a hole.

Q178. What size is that drain pipe, if you recall?

A. I don't recall.

Q179. You inspected the floor today, did you not, beneath the chill room?           A. Yes.

Q180. Did you see any other holes that would take the drain pipe which you installed?

A. I don't remember whether I saw another hole there or not. I was just trying to think.

(Deposition of Anton Broms)

Q181. But you did drill a hole through the floor? [927]

\* \* \* \* \*

Q182. Mr. Broms, I show you another photograph labeled Plaintiff's Exhibit Y-16 and ask you if you can identify what is shown in that photograph.

A. Well, it is a box arrangement that they have in the chill room.

Q183. Did you see it today?

A. I saw it today.

Q184. To what do you refer as the box arrangement?

A. Well, it covers the housing of the cold air pipe, apparently, that comes from the diffuser.

Q185. In pointing to the photograph you refer to the box structure from which apparently the pipe is extending? A. Yes, that is it.

Q186. That box structure appears to be against a wall at the right. What wall is that?

A. That would be the wall to the locker room, between the locker room and the chill room.

Q187. Is the room which we see here the chill room or the pre-cooler room?

A. The pre-cooling room; yes, sir.

Q188. Is that the room that, as you have testified, contained the Carrier diffuser unit? A. Originally.

Q189. Yes. Will you compare the location at the time [928] you installed it of the Carrier diffuser unit with relation to this box structure appearing in Exhibit Y-16?

A. The Carrier diffuser unit sat right below this box-like structure in the original installation.

Q190. How was the air taken from the locker room into the Carrier diffuser unit and discharged back into it, as you have testified? A. There was a hole—

(Deposition of Anton Broms)

Q191. When the Carrier unit was in operation in the pre-cooler room, how did it operate to cool, as you have testified, the locker room?

A. There was an opening cut through the wall.

Q192. Through what wall?

A. Through the wall between the chill room and the locker room that attached to the opening on the bottom of the cold diffuser. And there was another opening in the top through the wall between the chill room and the locker room at the top, where the cold air was ducted and passed through the wall into the locker room.

Q193. You say there were openings cut in the wall. Who cut those openings?

A. I imagine that the carpenter cut them. I don't remember.

Q194. Do you know pursuant to whose direction he cut them? A. No, I wouldn't say. [929]

Q195. Did you actually see the openings yourself?

A. Oh, yes; I saw the openings.

Q196. And where were they with reference to the photograph which you hold in your hand, Exhibit Y-16?

A. Well, the opening in the top was apparently right here near the ceiling, and this box-like affair covers probably most of it. The other opening was down at the bottom where it is covered now by a duct, apparently.

Q197. You examined the wall to substantiate what you now say? A. Yes.

Q198. When did you do so?

A. About an hour ago, or a little more.

Q199. I show you another photograph marked Exhibit Y-17 and ask you to identify the same, if you can.

A. Well, that looks very much like the Carrier diffuser that they have in their locker room over there now.

(Deposition of Anton Broms)

Q200. Is that the Carrier diffuser unit to which you have referred in your testimony? A. Yes, sir.

Q201. On the face of the unit directly above the name plate entitled "Carrier Cold Diffuser" I notice a diamond-shaped piece of metal. What is that piece of metal?

A. That is a peephole. You can push that to one side and look in and see the top part of the coil. [930]

Q202. Have you observed the top part of the coil through that peephole? A. I have.

Q203. Did you do so when you first installed the equipment? A. I did.

Q204. When did you last do so?

A. This afternoon.

Q205. How far toward the right inside the unit can you clearly see through that peephole?

A. See to the end of it.

Q206. What do you see there at the end of it?

A. Well, several things I saw there. There is a pipe strap in there fastened to the metal cross member of the unit.

Q207. Do you know anything about that pipe strap?

A. Well, it is apparently the same pipe strap that I put in there to hold one end of this water defrosting spray head.

Q208. What is the present appearance of that pipe strap?

A. Well, one end of it, is apparently fastened on there. The other end is hanging down, and it is all corroded or coated. I don't know with what, but it is all covered.

Q209. What is the shape of that pipe strap?

A. A U with two ears on it. [931]

(Deposition of Anton Broms)

Q210. To what is one end attached, as you have said?

A. To a cross member.

Q211. What do you mean by the cross member?

A. The cold diffuser unit is built in three different sections, set one on top of the other, and this is the cross member of the top section, the lower cross member of the top section, across the end.

Q212. In this same view you see a hand carrying a pencil pointing to a dark spot in the end of the unit. Can you identify that dark spot?

A. That is a hole in the shell, in the housing.

Q213. Do you know how it came to be there?

A. Apparently I put it there myself.

Q214. For what purpose?

A. To run this spray nozzle or spray pipe through over the top of the coil.

Q215. Do you recall which end of the unit the spray pipe was run in? By "end" I mean the narrow dimension.

A. Well, it was on the narrow end there, on the end of the spray unit.

Q216. Where we see the dark spot identified as a hole? A. Yes.

Q217. What is the location of the hole with respect to a horizontal line which apparently is a juncture between sections?

A. It is about three inches up, I would judge, from the [932] bottom of the top section.

Q218. How does its elevation compare with the point at which the strap is supported on the other side?

A. Well, it would be approximately three inches above—approximately.



(Deposition of Anton Broms)

Q219. For what reason was the hole drilled through at that particular location?

A. To give a drain to the spray pipe that I put in there.

Q220. To the best of your recollection, judging from today's appearance of the unit, is that the hole that you drilled?

A. I would say it was.

Q221. Now, Mr. Broms, how long after the water defrosting system was installed as you described did you remain on this job?

A. Well, I was off and on it probably a week.

Q222. When you then left the job was the Carrier unit visible or not within the chill or pre-cooler room?

A. It was visible in the chill room.

Q223. I show you a drawing and ask you if you can identify the same.

A. Well, this looks very much like a sketch I gave you on this. It has a little straighter lines than the sketch I gave you.

Q224. Is it a fact that this drawing was prepared by me [933] pursuant to your instructions?

A. That is right."

Mr. Lyon: That is objected to as calling for a conclusion of the witness. Certainly what you did according to his direction he is hardly competent to testify to unless he saw it done.

Mr. White: Oh, he can say what the sketch means, your Honor, without having seen it.

The Court: Oh, I think so. Objection overruled.

Q225. Did you tell me what to draw?

A. I gave you a sketch.

Mr. Lyon: The sketch is the best evidence.

(Deposition of Anton Broms)

The Court: Then here it is, Exhibit Y-22.

Mr. Lyon: No, that isn't the sketch.

The Court: It isn't?

Mr. Lyon: No.

Mr. White: Very well.

Q226. I will show you first a different paper captioned "Northwestern Refrigeration Company," and ask you if you can identify the same.

A. Well, that looks very much like a sketch I made. That is my signature on the bottom.

Q227. Is that the sketch that you gave me?

A. I would say so.

Q228. I call your attention to the fact that on this sketch [934] there are at the left two words written in pencil, one "Handle" and the other "Hose."

A. That is not my writing.

Q229. Very well. What does this drawing purport to represent?

A. Supposed to be a front elevation of the Carrier cold diffuser that is at Trullinger & Eustice's locker plant.

Q230. Is the drawing accurate and to scale?

A. No, sir. I wouldn't say it was accurate as to scale.

Q231. Does it show all the details?

A. Well, no, it wouldn't show all the details. It just gives a general idea of what it looks like from the outside.

Mr. White: May this be marked for identification Plaintiff's Exhibit Y-22.

(The drawing above referred to was thereupon marked by the Notary Plaintiff's Exhibit Y-22 for identification.)

Mr. Lewis Lyon: I beg your Honor's pardon. If that sketch is the one that this witness produced and it is marked Y-22, I was in error.

(Deposition of Anton Broms)

The Court: Yes. I think it is time to recess now. At what page are you?

Mr. White: Page 160, and we have just completed question and answer 231, and reference has been had to the marking of the Exhibit Y-22. [935]

The Court: Very well. We will recess until 2:00 o'clock.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p. m. of the same day.) [936]

Los Angeles, California, September 24, 1946, 2:00 o'clock P. M.

Mr. White: At the close this morning reference had just been made to Exhibit Y-22, and the record shows following that an objection by Mr. Lyon.

Mr. Lyon. That objection will be reserved until the offer is made. There wasn't an offer made at that time, your Honor.

The Court: All right. Proceed.

By Mr. White:

Q232. How does what is shown on this sheet, Exhibit Y-22, correspond to any description you may have in the past given me of that Carrier diffuser unit?

A. Well, it looks like an original sketch that I gave you.

Q233. The original piece of paper?

A. No, the paper is heavier than we use.

Q234. But what is shown on the paper is to your recollection the same?

A. Yes, I would say that it was the same.

(Deposition of Anton Broms)

Q235. Now I show you another drawing and ask you if it has any meaning to you?

A. Part of the drawing is the same, I would say, as the original sketch that I gave you.

Q236. Beyond that statement what does the drawing repre- [937] sent, do you know?

Mr. Lyon: That is objected to as calling for a conclusion of the witness.

The Court: Sustained.

By Mr. White:

Q237. How does that drawing compare with your recollection of the water defrost system to which you have testified as having been installed by you at Trullinger & Eustice?

Mr. Lyon: That is objected to as incompetent, irrelevant and immaterial, as to how this drawing prepared by someone else might compare with something.

The Court: Overruled.

A. It looks like the installation I made.

By Mr. White:

Q238. Mr. Broms, how does that drawing compare with any past verbal descriptions of yourself concerning that Yamhill installation?

Mr. Lyon: That is objected to on the ground the record speaks for itself and is the best evidence.

The Court: Sustained.

Q239. Have you in the past described it to me?

Mr. Lyon: That is objected to as calling for hearsay testimony.

The Court: Sustained. [938]

(Deposition of Anton Broms)

By Mr. White:

Q240. How does that drawing compare with what you explained to me?

Mr. Lyon: Same objection.

The Court: Same ruling. Sustained.

By Mr. White:

Q242. Referring to that sketch or that drawing, will you describe what may be shown thereon with respect to your recollection of your installation of the water defrost system to which you have testified?

Mr. Lyon: Same objection.

The Court: Same ruling.

Mr. White: Your Honor, the witness had testified that it looks very much like a sketch he made, that being under his signature.

The Court: We have the sketch here with his signature and that is something that somebody else drew. This is in the nature of argument. In other words, it is a conclusion that the lawyer draws from what somebody said.

The rulings will stand. Proceed.

Mr. White: I now offer the direct testimony.

The Court: I thought you just finished with the direct.

Mr. White: Yes.

Mr. Lewis Lyon: I will offer, and would like to read at this time, the cross examination of Mr. Broms. [939]

#### Cross Examination

By Mr. Lyon:

Q259. Mr. Brom, when this Carrier unit was located in what you call the pre-cooling or chill room, what was the temperature of that room, if you know?

(Deposition of Anton Broms)

A. Well, we tried to maintain it, I suppose, around 35 degrees; 35 to 38 degrees is what is generally used in a pre-cooling room.

Q260. Did it compare favorably with the temperature of that room today?

A. No. At the time we had difficulty because that cold diffuser let too much cold out of the shell into the chill room, and we had a hard time to keep it from freezing, to start with.

Q261. You endeavored, however, to maintain the temperature of that chill room above freezing; isn't that right? A. Yes, that is right.

Q262. Now isn't it true also that you had over the openings in the wall between the chill room and the locker room doors to close those openings, both inlet and outlet?

A. Not that I recall.

Q263. You don't recall any such doors?

A. No, I don't recall any doors.

Q264. You did not before endeavoring to spray water over the pipe close the inlet and outlet from the diffuser unit to [940] the locker room?

A. Not that I remember.

Q265. You don't remember say such things?

A. No.

Q266. Would you say it was not true?

A. No, I would not.

Q267. You just have no recollection of that?

A. I have no recollection of there being any doors on the job.

Q268. Did you ever take the temperature inside of the diffuser unit at any time during the time you were spraying water over the coils? A. No.



(Deposition of Anton Broms)

Q269. You have no way of knowing, then, the rise in temperature inside of the cold diffuser during the time the water was being sprayed?

A. No, I wouldn't have any way of knowing.

Q270. The water that was sprayed came through what sized pipe?      A. Half-inch pipe.

Q271. It was a half-inch pipe. How many holes were there in the pipe?

A. I don't know, but there were lots of them.

Q272. You say you drilled them. How far apart were they drilled? [941]

A. I would say about an eighth of an inch; something like that. I don't remember exactly, but they were drilled about as close together as I could drill them.

Q273. What was the length of the pipe?

A. Well, roughly I would say about four feet.

Q274. And how large were the holes?

A. About a thirty-second of an inch, if I remember.

Q275. Were they all in a straight line?

A. As straight as I could make them.

Q276. Did you ever measure the amount of water that was sprayed over the coils during any interval of time?      A. No, I never measured the water.

Q277. Did you ever measure the amount of water that came out of the drain during any defrosting operation?      A. No, I never measured it.

Q278. Would you say that Mr. Eustice's or Mr. Trullinger's testimony that the drain water drained openly onto the ground floor of the basement was in error in the use of this system?      A. I don't get the question.

Mr. Lyon: Read the question.

(Deposition of Anton Broms)

(Last question read.)

A. Well, it didn't drain, to my knowledge, on the floor of the basement. We ran it out through the door outside. [942]

Q279. Then you would say that their statement that it drained openly onto the basement floor was in error?

Mr. White: Counsel, in order for your question to be proper you must state the time within which you are referring.

Mr. Lyon: I am asking the witness the question.

A. Well, I couldn't say that it was in error, because it might have been there after I left, but before I left we ran the water outside.

Q280. You left this job about a week after you say you made this run?

A. I am just guessing at about a week. I don't know definitely how long it was.

Q281. Were you ever back to it before you came to look at it here?

A. I came through here once—oh, I don't remember how long it was afterwards, but it was quite a while afterwards; a year or more afterwards. I came through town here and stopped in there and looked at it.

Q282. And at that time they had changed the system over, had they not?

A. They had changed the system over.

Q283. And were no longer operating it?

A. Not with—

Q284. Now you testified—

Mr. White: Let's have the witness' answer to that.

A. Not with cold water. [943]

(Deposition of Anton Broms)

By Mr. Lyon:

Q285. They were using hot air then?

A. I think they were using hot air.

Q286. Now, Mr. Broms, you stated on direct examination that you had installed a Recold diffuser; is that correct?

A. That I have installed Recold diffusers?

Q287. Yes.                      A. Yes.

Q288. And those use water defrosting, do they not?

A. Some of them.

Q289. When did you first install a Recold diffuser unit using water defrosting?

A. I would guess about five years ago.

Q290. Did you ever install any other system using water defrosting?                      A. No.

Q291. You know, however, that those Recold water defrosters are successful in operation, don't you?

A. Oh, yes.

Q292. And sold in great quantities at the present time?                      A. Yes.

Q294. You never attempted to make another installation like the one that you made for Trullinger & Eustice, did you?                      A. Never did.

Mr. Lyon: That is all. [944]

Redirect Examination

By Mr. White:

Q295. Mr. Broms, you stated on cross examination that the Carrier unit in the chill or pre-cooler room let too much cooling in the room. What did you mean by that?

(Deposition of Anton Broms)

A. The cold coming from the shell or the heat going to the shell from the room, rather, because the shell was so much colder than the pre-chill room.

Q296. Then you at the time of its installation proposed to maintain, as I recall your answer on cross examination, a temperature of 35 degrees?

A. 35 to 38 degrees.

Q297. Did you succeed in doing so?

A. No, we had trouble because it would pull down too cold.

Q298. How do you know it did?

A. Well, according to their say-so.

Mr. Lyon: I move to strike the witness' testimony on the ground of hearsay, particularly with respect to the temperature of the room.

The Court: It may be stricken.

By Mr. White:

Q299. Did you personally see anything in the room indicative of lower-than-intended temperature?

A. I don't recall. [945]

Q300. But you do recall that the Carrier unit was openly exposed to the room?

A. Oh, yes. It was that.

Q301. You stated, I believe, that you called by the plant about a year after its installation, the refrigerating plant installation, by you. Do you know that that was exactly a year?

A. No, I don't know that. I just happened to be driving through here, and I just stopped in to see how it was. But I don't remember how long ago it was; that is, how long after the installation. I am just guessing that it might be a year.

(Deposition of Anton Broms)

Q302. You don't remember how long after it was?

A. No, I don't know how long. I am just guessing it was about a year afterwards.

Q303. But that is a guess? A. That is a guess.

Q304. You stated also that you did not use or install any water defrost equipment other than the equipment of Refrigeration Engineering after your making of the Trullinger & Eustice installation. Is that right?

A. I did not. Now, I can maybe change or correct that a little. I did not install any water defrosting system. We installed the brine spray, and he was having trouble keeping his brine to the right density so that it would not freeze on [946] the coils, and I suggested that he take a hose and wash the frost off.

Q305. If the occasion had arisen, so far as the operating characteristics of your Trullinger & Eustice water defrosting installation is concerned, would you have made another such installation?

Mr. Lyon: That is objected to as calling for a conclusion of the witness, and objected to as being of no probative value. I will ask a question on voir dire on that.

The Court: Sustained.

By Mr. White:

Q306. You have been continuously engaged in refrigeration over these years, have you not?

A. I have.

By Mr. Lyon:

Q307. And you have installed many refrigeration plants, haven't you? A. Yes.

Q308. And you have run into difficulty with defrosting in a great many of them, haven't you?

(Deposition of Anton Broms)

A. Oh, yes, you run into difficulties in defrosting with any of them. You do with the cold water defrosting, as far as that goes, if they don't wash it and take care of it, or any of the others. It has to be looked after. Do you want me to answer your question? [947]

Mr. White: Yes.

The Court: That was the question to which the objection was sustained. I sustained the objection to the question about what he would have done supposing something or other.

Mr. White: We are reading a later question, your Honor.

Mr. Lewis Lyon: It is the same question.

The Court: He came back and said, do you want me to answer your question. The objection to that is sustained.

Mr. White: I beg your pardon.

Q309. In stating that you installed no other water defroster than the Refrigeration Engineering type, did you intend to mean in any way that you refrained from doing so because of any lack of efficiency of the Trullinger & Eustice installation?

Mr. Lyon: That is objected to as calling for a conclusion of the witness.

The Court: Sustained.

By Mr. White:

Q311. But did the Trullinger & Eustice job, to the extent that you were familiar with your own installation, operate and serve its intended purpose? •

Mr. Lyon: That is objected to as calling for a conclusion of the witness.



(Deposition of Anton Broms)

The Court: I think that is probably admissible because the question is limited to the extent of his information and [948] knowledge. Objection overruled.

A. I would say that it did.

By Mr. White:

Q312. On the basis of your experience in this business? A. Yes.

Q313. Mr. Brome, I show you what appears to be a photostatic negative of a sketch signed "Anton Broms." Can you identify that sketch?

A. Well, that looks very much like the pencil sketch I drew and gave you. That is my signature on there. It looks like my printing.

Q314. Does that sketch diagrammatically represent your own independent recollection of the system?

Q315. Will you identify the parts which you labeled on that sketch?

Mr. Lyon: I think the sketch speaks for itself and is the best evidence of what is on it and labeled on it.

The Court: Overruled.

Mr. White: Proceed.

A. Well, starting at the stop and drain down in the basement, I went up through the floor with a piece of hose fastened onto the pipe that went to the spray pipe that was in the lower section of the top coil—or in the lower part of the top section of the cold diffuser.

Q316. Is that stop and drain valve so designed on this [949] sketch the stop and drain valve to which you testified today? A. Apparently the same.

Mr. White: Thank you. Let this be marked for identification as Plaintiff's Exhibit Y24.

(The document referred to was marked Plaintiff's Exhibit Y-24 for identification.)

Mr. White: That is all.

The Court: Any further cross examination?

Mr. Lyon: There was no further cross examination, your Honor.

The Court: The deposition will be in evidence. All of the exhibits offered except the one Y-23 will be admitted.

The Clerk: May I ask to have them named?

The Court: Those are Exhibits No.—No. 1 was not identified. The only things that were identified were Y-14—you are going to offer them all at the conclusion of the Yamhill depositions, are you?

Mr. White: Yes.

The Court: All right. I will wait until then.

Mr. White: The remaining depositions, your Honor, are somewhat lengthy and certain portions may be selected for reading into the record that might serve best to establish certain facts needed to supplement Bron's testimony, such as, for example, the time of the installation, temperature, etc.

The Court: Just proceed and state the substance of the [950] preliminary and read what you think is material to the issues.

Mr. White: In view of the question apparently raised in the defendant's pretrial brief as to whether the system operated satisfactorily, certain pertinent testimony may be read, if your Honor desires, into the record on that particular point.

The Court: I have no objection. It is your lawsuit, not mine.

The defendant raised the question in his pretrial brief that the Yamhill installation was an experiment and was not a satisfactory installation and was abandoned. That is the general position you take?

Mr. Lewis Lyon: That is correct, your Honor.

The Court: I suppose if we have any testimony relating to that—however, I take it that all of your direct examination you consider material to each of these witnesses?

Mr. White: That is true.

The Court: I did not mean that you did not consider material those things, but there are matters of introduction. We know now who those fellows were and that they owned it. I don't think anybody will challenge that.

Mr. Lewis Lyon: No.

The Court: I do not know that there is any challenge as to the general date of the installation, is there? [951]

Mr. Lewis Lyon: I don't think there is any evidence that establishes the date, your Honor.

The Court: Very well.

Mr. Lewis Lyon: There is a very material observation there that, as far as the system is concerned, there is no date that establishes the date of the change-over from hot gas to this other method or no date established as to when it was taken out.

The Court: I might offer this observation, that I think one of the most material things in the whole lawsuit is found in the first sentence of your patent involved: "My invention relates to low temperature refrigeration where space is required to be constantly maintained at temperatures below the freezing point of water."

Mr. Lewis Lyon: That is right.

Mr. White: First I will offer the direct testimony of Fred L. Trullinger, and from that I think it might be well to read into the record certain portions pertinent to the matter of temperatures, whether the installation operated satisfactorily and, since the point has been raised, why it was taken out.

The Court: Whatever you wish. Just leave out reading the introductory part.

Mr. White: Yes. I think these comments serve that purpose, your Honor. [952]

Referring to page 49 of the Trullinger deposition, with specific reference to temperature conditions existing in the locker room:

“Q231. Had you made any observations concerning temperature conditions in the insulated locker room before the insulated compartment wall was placed?

“A. No. We held it at about 10 above zero, and that is the way it always was, and I didn’t notice any difference—any change other than that we could defrost now and before we couldn’t.

“Q232. What is the basis for your statement that a temperature of zero to 10 degrees existed in the locker room?

“A. 10 degrees above zero. We had a thermometer there, and it was held at or near that. Of course, there was times when it might be higher or it might be lower, but that was the attempted temperature to be held.

“Q233. Did you personally read the thermometer?

“A. Oh, yes; many times.

“Q234. Can you compare the temperature in the insulated locker room and the temperature in the insulated compartment?

“A. No, I have no way of comparing that.”

The Court: In the previous deposition the terms "pre-cooling room" and "chill room" were used. Now this is the insulated locker room. Is that a different room?

Mr. Lewis Lyon: Yes. [953]

Mr. White: That requires, your Honor, some explanation. Counsel I believe will agree to this statement of the circumstances leading to the making of this insulated compartment without going through great lengthy testimony.

It has been established by Brom's statement that the diffuser unit was openly exposed in the chill room, and therefore that the temperatures became lower than those desired for the purposes of a chill room. That being the case, then it became necessary to isolate thermally the diffuser unit from the chill room, and for that purpose an insulated wall was built about the diffuser which then formed the insulated compartment.

The Court: Was that the pre-cooling room then?

Mr. Lewis Lyon: The pre-cooling room and the chill room were the same thing, and outside of that rooms, separated by a door and a partition, was a locker room which was separated from the chill or pre-cooler room, and this particular diffuser was put, not in the locker room in the 10 degree space, but in the pre-cooling room. And it is very interesting right here to note Mr. Trullinger's statement on direct examination that until they did something about trying to insulate that diffuser it wouldn't work at all, it would not defrost. That is in contradiction to Mr. Brom's testimony that the thing worked very successfully.

The Court: Is that in his direct testimony? [954]

Mr. Lewis Lyon: Yes.

The Court: You can read that then. Do you want to introduce it now?

Mr. Lewis Lyon: I will. He has read it, in fact.

The Court: I did not so understand it. I could not understand just what he was talking about because I got thrown off the merry-go-round here with this new room.

Mr. White: If you will refer, your Honor, to Exhibit Y-11, your Honor will see the general room arrangement.

The Court: Then there are only two rooms?

Mr. White: Properly speaking, there are only two rooms.

The Court: So the insulated chill room and the pre-cooling room are the same thing?

Mr. White: That is right.

Mr. Lewis Lyon: Are one and the same.

The Court: And the locker room is only the second room?

Mr. Lewis Lyon: That is right.

The Court: Are you going to read testimony showing when this was made into a separate room, or is that in the record?

Mr. Lewis Lyon: There isn't any testimony as to that.

Mr. White: Yes, that is testified to.

The Court: I received the impression from hearing the witness Brom's testimony that there were two rooms and there was one room where the cooling unit was located and an air jet went through in there, and there were some holes in the [955] wall that went to another room, and over those holes in the wall later a box was put, as evidenced by Exhibit Y-16.

Mr. White: That is correct.



Mr. Lewis Lyon: Yes.

The Court: Now, this Y-16 is what you now call the insulated locker room?

Mr. Lewis Lyon: No.

Mr. White: No, your Honor. Y-16 shows the wall condition of that room as it exists today. Broms referred by relation to the box structure which the exhibit shows as being on the wall, the previous and, in fact, present location, though the holes are closed.

The Court: What room is this in?

Mr. White: The diffuser, your Honor?

The Court: No, Y-16, that box, what room is that in?

Mr. White: That is in the chill room.

The Court: And in the insulated locker room?

Mr. White: That is right. It is in the chill room.

The Court: All right.

Mr. White: And I might say that the insulated compartment which formerly enclosed the diffuser is removed now since the diffuser has been moved, transferred into the locker room.

Mr. Neave: I think what may be confusing—I don't want to make confusion more confounded—is the fact that [956] this box that you see in Y-16 is part of the duct work and has nothing to do with what the diffusing unit was. It was underneath the box.

The Court: I knew that. I understood his testimony about that, but what I am trying to find out here is how many rooms there are and what they are. Now you just introduced something else, that the diffusing unit has been moved.

Mr. White: That occurred later on, your Honor, when the changeover to a warm air defrosting system occurred.

In other words, it is now possible to see the original diffuser formerly in the chill room but now in the locker room.

The Court: You mean when the depositions were taken?

Mr. White: When the depositions were taken.

The Court: The diffuser has been moved from the chill room into the locker room?

Mr. White: That is right.

The Court: By the diffuser you mean the refrigerating unit?

Mr. White: That is correct.

The Court: So that this picture Y-18 with the turkey on it here, that is now in the locker room?

Mr. White: That is correct.

The Court: And when Broms built it it was still in the room that was the locker room? [957]

Mr. White: No, it was then in the chill room.

The Court: But you just said that the two rooms were both the same.

Mr. Lewis Lyon: No.

Mr. White: No. The so-called insulated compartment occupied a section of the chill room.

If we may picture this: At first the diffuser stood openly exposed in the chill room adjacent to that wall which in the exhibit shows the box structure now present. Because of temperature conditions, cooling, excessive cooling of the chill room resulting from the open exposure of the diffuser, it was decided to insulate it from the chill room proper by placing about the diffuser this wall which extended from—

The Court: Broms didn't have anything to do with that.

Mr. White: That is correct.

The Court: That was done after he finished.

Mr. White: That is true.

The Court: Then they decided to change it again by moving the refrigerating unit out of the insulated compartment of the insulated chill room into the insulated locker room.

Mr. White: That came a great time later when the change to warm air came on.

Mr. Lewis Lyon: It came right after they failed to water defrost.

The Court: Your witness now is one of the operators of [958] the unit?

Mr. White: Yes.

The Court: What do you propose to prove by his testimony?

Mr. White: We propose to prove by his testimony his complete familiarity with the installation, and the deposition as a whole goes to establish his having authorized and personally supervised the building construction needed to form the locker and chill room.

Then later the installation of the refrigerating equipment, and his rather frequent visits to the plant to keep familiar with what was going on, his findings, observation, and that the chill room temperatures first were kept lower than desired for their intended purposes, his complete familiarity following that with the placement of the insulated enclosure about the unit, and his familiarity with what the plant was and did with respect to water defrosting from that time on.

In other words, he was one of the owners and made it his business to keep posted.

The Court: You read some testimony here that in the insulated locker room he had seen the thermometer register at 10 degrees above zero many times. That is just what you read, wasn't it?

Mr. White: That is true. [959]

Mr. Lewis Lyon: I read Question 231 and the answer to it, your Honor.

The Court: I do not have the deposition here.

Mr. Lewis Lyon: This is supposed to refer to the conditions after the insulation was supposed to be put around the diffuser room, around the diffuser or refrigerating unit at a time which is not established in the depositions, and where this witness says that before the insulation was put around there that they could not defrost.

The Court: You mean he previously said that?

Mr. Lewis Lyon: Yes.

The Court: You had better read the whole deposition, I guess.

### FRED L. TRULLINGER

was thereupon produced as a witness in behalf of the plaintiff herein and, having been first duly sworn by the Notary Public, was examined and testified as follows:

#### Direct Examination

By Mr. White:

Q1. Will you state your full name and address.

A. Fred L. Trullinger, 3710 Wauna Vista Drive, Vancouver, Washington.

Q2. In what businesses are you engaged at present?

A. Businesses?

(Deposition of Fred L. Trullinger)

Q3. That is right. [960] A. A good many.

Q4. Would you mind stating them?

A. Well, I am in the seed business, wholesale and retail, at Portland, wholesale and retail in Seattle; I am in the general merchandising business at Yamhill, Oregon, and in the locker business out there also. I own that locker plant.

Q5. At Yamhill? A. At Yamhill, yes.

Q6. Have you had experience with locker plants other than at Yamhill?

A. Oh, yes; with my son's plants located here in Portland and at Milwaukee, at Multnomah, and Amity, Oregon.

Q7. What in general is your familiarity with those plants?

A. Oh, I helped to build them when I was on the job while they were being built, and I have operated them now for four years while he has been in the Army.

Q8. You are at least generally familiar with the refrigerating systems used to cool locker rooms?

A. Well, I am with the ones that we built, and I have noticed other makes. I know what ours is.

Q9. When you say "ours" you refer to what?

A. My son and myself.

Q10. The business at Yamhill is operated under the name of Trullinger & Eustice? [961] A. Yes.

Q11. How long have you operated that business, Mr. Trullinger?

A. In that present location since 1904.

Q12. Have you steadily maintained that business from 1904 up to the present? A. Yes.